REPORT RESUMES

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VOCATIONAL EDUCATION IN UTAH, A SURVEY REPORT.
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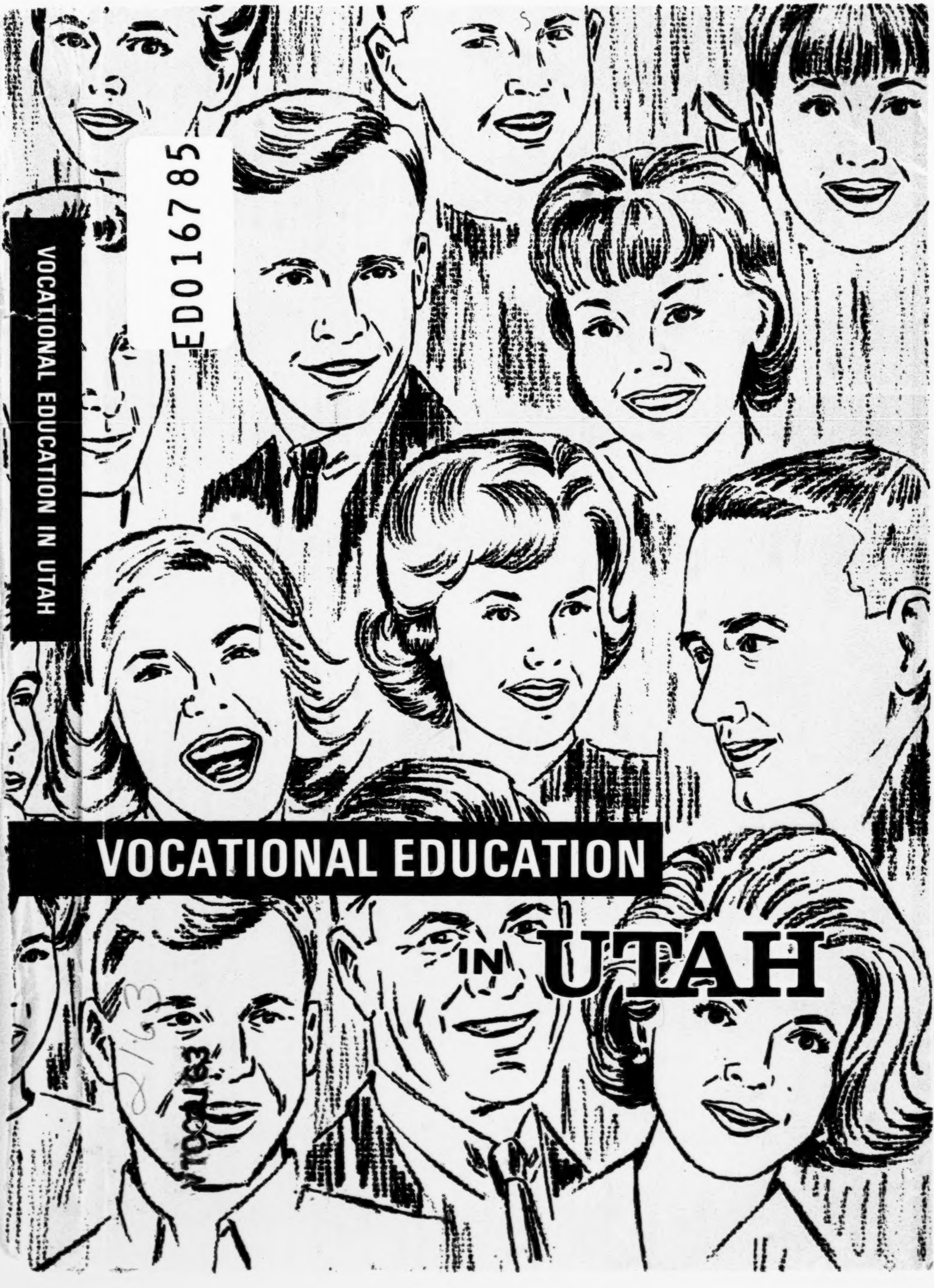
TO DEVELOP PLANS FOR A LONG RANGE PROGRAM OF DEVELOPMENT AND IMPROVEMENT, A 15-MEMBER TEAM FROM 12 STATES SURVEYED 14 AREAS OF VOCATIONAL-TECHNICAL EDUCATION. TEAM MEMBERS, WORKING WITH THE STAFF OF THE DEPARTMENT OF PUBLIC INSTRUCTION, COLLECTED DATA FROM STATE OFFICES AND VISITED SELECTED SCHOOLS THROUGHOUT THE STATE. THE STUDY WAS CONCERNED WITH STATE GOALS, PROGRAMS, AND POLICIES RATHER THAN DETAILS OF LOCAL OPERATIONS. AREAS STUDIED WERE--(1) ORGANIZATION AND ADMINISTRATION, (2) AGRICULTURAL EDUCATION, (3) DISTRIBUTIVE EDUCATION, (4) INDUSTRIAL ARTS, (5) TRADE AND INDUSTRIAL EDUCATION IN UTAH HIGH SCHOOLS, (6) TRADE AND TECHNICAL EDUCATION IN POST-SECONDARY SCHOOLS, (7) OFFICE OCCUPATIONS, (8) VOCATIONAL HOMEMAKING, (9) VOCATIONAL IMPLICATIONS OF GUIDANCE FUNCTIONS, (10) VIEWS OF LABOR, (11) VIEWS OF MANAGEMENT, (12) TEACHER PERSONNEL, (13) FINANCING VOCATIONAL AND TECHNICAL EDUCATION IN UTAH, AND (14) PHYSICAL FACILITIES FOR VOCATIONAL-TECHNICAL EDUCATION. A DESCRIPTION OF THE CURRENT STATUS, AND MAJOR RECOMMENDATIONS FOR EACH AREA ARE PRESENTED. (EM)



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OFFICE OF EDUCATION

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A SURVEY REPORT

DIVISION OF SURVEYS AND FIELD SERVICES
George Peabody College for Teachers
Nashville, Tennessee
1966

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Foreword

Upon the recommendation of the State Administrator of Vocational and Technical Education, the Utah Department of Public Instruction requested the Division of Surveys and Field Services, George Peabody College for Teachers, to conduct a comprehensive study of vocational-technical education in the state. The purpose of the study was to develop plans for a long-range program of development and improvement.

The Utah vocational staff and the Peabody Division collaborated in designing a study plan for the survey, establishing a time schedule, and selecting an outstanding group of nationally respected specialists for the survey team. The fifteen-member team was drawn from twelve different states and assigned to cover fourteen special areas in vocational-technical programs.

The study was started early in 1966. Survey staff members, working with their counterparts in the Utah State Department of Public Instruction, collected data from the state offices and visited various selected school centers throughout the state. The findings, conclusions, and recommendations have been prepared in two volumes: a full report, detailing the factual information, observations, and proposals, which has been published in limited quantities for controlled distribution; and an illustrated digest highlighting the major problems and issues, but including all of the recommendations of the full report.

The study has been conducted from a statewide point of view, with concern for state goals, programs, and policies rather than for details of local operations. The recommendations reflect the best professional judgments of outsiders who have gleaned from coast to coast the best known practices in vocational education and adapted them to observed conditions in Utah. Consequently, the reports are intended to be study and discussion guides as Utah leaders develop an action program to strengthen this area of educational service.

Utah evidences in many ways the conviction that her human resources are her most valued assets, and the belief that an educated citizenry and work force is the best safeguard of the state's well-being. The survey staff believes further that vocational-technical education for youth and adults is the avenue through which many special abilities are developed, occupational skills are learned, job satisfactions are created, and thus simultaneously the economy is strengthened and lives are enriched. If these beliefs are true, then the proposals which this survey has produced express desirable goals, sound procedures, and justifiable expenditures for Utah to undertake.

The members of the survey staff wish to commend Dr. T. H. Bell, State Superintendent, and the State Department of Public Instruction for the timeliness and purpose with which this study was authorized. Special appreciation is expressed to Mr. Mark Nichols, Administrator, and his staff for their responsiveness to every request for cooperation, guidance, and assistance. The assignment has been both a privilege and a challenge to the survey staff. It is hoped that the study will contribute to further advances in the state's leadership position and to an exemplary program that can serve as a prototype for other states.

November 1966

Director

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PART I—ORGANIZATION AND ADMINISTRATION

- **Organization and Administration**

CHAPTER 1

ORGANIZATION AND ADMINISTRATION

The objective of vocational-technical education is to provide persons with skills and knowledge to make them employable. Employability will not be satisfactory unless these persons have motivation, aptitude, and ability for a labor market job. They will also need to be good citizens with adequate social and academic proficiency. Vocational-technical education is generally provided after a person has had 8 or 10 years of general education. When the vocational-technical education is provided in the secondary or post-secondary school as pre-employment training, it is, in general, a one-half day program with the other one-half day devoted to general academic studies. Vocational-technical education is a part of the total educational spectrum, usually beyond the tenth grade.

Vocational-technical education is a teaching-learning process which takes place in the classrooms, laboratories, shops, and work-study locations. It, however, becomes a "mass production" process as it is provided throughout a state, and to thousands of persons. The effectiveness and efficiency of the process can be greatly increased by adequate organization and administration. Organization and administration must be considered in terms of the objectives of the program, the environment, and the personnel involved.

Vocational-technical education must be available to four groups of persons: (1) youth in high school; (2) youth and adults in post-high school institutions (technical institutes, junior colleges, colleges offering one- two- or three-year programs for employment); (3) youth and adults at work (to update, upgrade or retrain those who are or have been in the labor market); and (4) youth or adults with special needs (those who cannot meet the standards of the normal vocational-technical program). Utah is now providing services for these four groups in the manner described in various sections of this study.

Certain ancillary services are necessary for effective vocational-technical education. These services are usually classified as: (1) teacher training, (2) guidance and counseling, (3) research and development, (4) administration and supervision, (5) facilities, and (6) finance and business management. The administration and organization for vocational-technical education services must provide for both instructional and ancillary services.

Prevocational and Related Instruction

No person is able to get or hold a satisfactory job unless he has the ability to read, write, and use numerical concepts. No person is likely to be a satisfactory employee unless he has achieved the ability to live and work with others, and in general, to be a good citizen. These are not specific vocational skills, but they are essential to job security in the labor market. The general program of studies from kindergarten through high school contributes to these competencies.

The general or academic curriculum such as industrial arts, homemaking, reading, writing, and often mathematics and science may be prevocational in nature. These subjects are essential for an adequate vocational program of instruction and yet they are not essentially vocational subjects. They should, therefore, be recognized as prevocational, and continuous efforts should be exerted to make these courses serve this purpose more effectively.

Programs for High School Youth

Most students of high school age now attend one of the 81 general-curriculum high schools. There is considerable evidence that if vocational education is to reach the high school student, vocational curricula must be available in the high schools of the residence area of these youth.

The basic organizational unit to provide vocational education to high school age youth should be the comprehensive high school. The statistical information provided in Tables 1 and 2 indicates that a number of high schools provide a diversified curriculum which would classify them as comprehensive high schools. There is evidence that new programs are being developed and more high schools are becoming involved. In 1961-62 there were 8 trade and industrial education programs in 8 different schools and for 6 different occupations. Four years later (1965-66) there are 145 trade and industrial education programs in 28 different school districts and for more than 15 different occupations. This is a remarkable record of growth (1800 per cent). It is accounted for by (1) the availability of more state and federal funds, (2) a greater general interest in vocational education, and (3) leadership efforts on the part of state and local school district personnel.

Table 2 indicates the number of vocational education programs in high schools of various sizes. It will be noted that 20 per cent of the high schools have enrollments of more than 1,000 in Grades 10-12, and approximately 32 per cent of high schools have fewer than 300 students in the same three grades. Sixty-eight per cent of the high schools have more than 300 students in Grades 10-12.

It is difficult to provide vocational programs in small high schools. High schools with an enrollment of fewer than 100 students would probably have a senior class of fewer than 25 students. Probably fewer than 10 seniors and fewer than 15 juniors would need or desire vocational programs. These 25 students would have aptitudes and interests in a number of different occupations. Even though about 6 per cent of Utah's high schools have fewer than 100 students, less than 3 per cent of Utah's high school students are in these very small high schools. Less than 10 per cent of Utah's high school students are in high schools of fewer than 300 students even though 32 per cent of the high schools are of this size.

TABLE 1
AVAILABILITY OF VOCATIONAL CURRICULA IN
UTAH HIGH SCHOOLS 1965-66

Occupational Category	*Number of High Schools with Vocational Curricula*	*Number of Students Enrolled in Vocational Curricula Grades 11 and 12*
Clerical and Office Occupations	79	19,975
Agricultural and Related	43	1,793
Auto Mechanics and Related	28	899
Electricity and Electronics	19	262
Merchandising and Sales	29	711
Construction Trades		
Metal Working	15	266
Wood Working	20	279
Graphic Arts		
Drafting	18	309
Food Services	3	52
Clothing Services	2	36
Health Services		
Data Processing		
Other	19	396

All high schools with an enrollment of more than 300 students should be comprehensive high schools. These high schools, in general, should provide a minimum of four vocational curricula to include programs for office occupations, merchandising

TABLE 2
AVAILABILITY OF VOCATIONAL CURRICULA IN UTAH HIGH SCHOOLS
1965-66

Total Enrollment Grades 10-12	*Total Number of High Schools*	*Number of High Schools with Following Number of Vocational Curricula*						
		0	*1*	*2*	*3*	*4*	*5*	*More than 5*
Over 1,000	23	0	2*	0	1	4	6	10
300-1,000	32	0	1*	10	9	5	6	1
100-299	21	0	6*	11	3	1	0	0
Fewer than 100	5	1	3*	1	0	0	0	0

* Schools offer clerical occupations only.

occupations, automotive or related occupations and electrical-electronic occupations. Often agricultural occupations, construction occupations, metal working occupations or wood working occupations could be justified because of student interest and aptitude, and/or labor market demands set by local patterns of gainful employment.

The Area of Specialized Vocational School Programs

The great diversity of interest and aptitude of students and the wide range of labor market demands create the need for a great diversity of vocational curricula. In general, this great diversity cannot be provided completely in the comprehensive high school. Utah has recognized this need, and for many years has provided two trade-technical institutes—the Salt Lake Trade Technical Institute in Salt Lake City and the Utah Trade Technical Institute in Provo. These schools offer diversified curricula to both high school and post-high school youth and adults.

The high school at Richfield has been designated an area vocational school and serves the three high schools in Sevier County and also three other high schools in adjacent counties.

The area vocational school should provide more extensive vocational curricula which should be available to high school youth whose high school does not provide these curricula. The area school should not replace nor substitute for the vocational curricula of the general high school. Indeed, the survey staff takes the position that it would be preferable to offer the opportunities in the local high school rather than in an area school if the needed breadth of programs can be provided at reasonable cost. Attendance at an area school should be permitted on a part-time basis, if the student maintains his membership and attends part-time the high school in his area of residence. Otherwise he should be permitted to transfer his membership to full-time attendance in the area school.

The area school should maintain defensible standards for entrance into its various curricula. These standards should demand reasonable interest, aptitude, and motivation of the student in the vocation of his choice. Where either achievement or discipline is not satisfactory the student should be returned to his high school of residence. A continuous alert is necessary to prevent an area school from becoming a "dumping ground" for problem students from other high schools.

Even though the area school can assist in solving the problem of vocational education for the small high school, the transportation problem will remain. To alleviate this situation it may be necessary to provide dormitory facilities in some locations.

Washington, Box Elder, Cache, and Weber counties should develop a selected high school into an area vocational school. These schools could then supplement the area school activities now performed by the Utah Trade Technical Institute in Provo, the Salt Lake City Trade Technical Institute, and Richfield High School. In addition, the vocational curricula of one of the high schools in the larger school districts should be expanded in order to concentrate and diversify the vocational offerings. In each of these area vocational schools, adequate counseling, placement, and field coordination services should be provided, and a minimum of five, and preferably ten, different occupational offerings should be made available.

Vocational programs in the high schools should begin with Grade 11. General education is so important for a vocational education foundation and for citizenship that it is highly desirable that major attention be given to academic subjects in the earlier years. Considerable prevocational course offerings should be available, beginning at least by the 9th grade. There need not be necessarily a rigid or wide separation between prevocational and vocational curricula. In general, it is considered advisable to postpone the specific vocational program until Grade 11.

Programs for Youth with Special Needs

Vocational education programs must maintain reasonable standards of aptitude, ability, motivation, and academic achievement for entrance into an occupational training program. These standards will eliminate some students. These students will probably consist largely of students who have not been able to achieve success in any other phase of the school program. Vocational education should accept some *(but not all)* of the responsibility for helping these students achieve successful school experiences.

Utah is providing significant educational programs for the deaf, the blind, and the severely physically handicapped. There is little evidence, however, that it is providing significant programs for the academically retarded, the mentally handicapped, the culturally handicapped, or the unmotivated youth that would give them any skills for economic security. Few, if any, other states have developed such programs. This is virgin territory for curriculum development, and tremendous federal funds are available for this purpose. The survey staff knows no reason why Utah should not develop prototype programs for these significant groups of youth.

Many programs designed to serve these youth—such as the Job Corps or Neighborhood Youth Corps—are in operation but, generally, they are not a part of the state school system and deal only with the youth who have not been successful in the public schools.

The Division of Vocational-Technical Education in Utah should establish the position of Specialist for Programs for Youth and Adults with Special Needs. The duties of this position would be similar to those of other specialists in curriculum areas. The program should, in general, be operated within the comprehensive high schools. The activities, for the most part, would be new activities and not necessarily even a part of the present program for the blind, the deaf, or those receiving vocational rehabilitation.

Programs for Post-high School Youth

For many years, Utah has provided high quality programs and diversified curricula for youth and adults beyond the age and achievement of high school youth. The most extensive curricula have been those offered in the technical institutes in Salt Lake City and Provo and in Weber College. Table 3 gives the enrollments and a classification of the various vocational-technical curricula in all the post-secondary institutions. There are approximately 10,000 students enrolled in approximately 50 curricula in these 7 institutions.

The area vocational schools should provide some vocational-technical education programs at the post-secondary level. So often the same equipment and same instructors can be used for either level. Consideration should be given to the use of equipment and facilities in the area schools on an extended day for such programs. This more extensive use of equipment and facilities can greatly reduce the capital investment required.

It is apparent that with the exception of Weber College the four-year colleges are not providing extensive undergraduate vocational curricula. It may be more difficult for Weber College to provide these curricula as the expanding degree pro-

TABLE 3

Availability of Vocational-Technical Curricula in Post-Secondary Institutions—1965-66

Occupational Category	Number of Full-Time Students Enrolled						
	Salt Lake Trade Technical Inst.	*Utah Trade Technical Inst.*	*Weber College*	*Dixie College*	*College of Eastern Utah*	*College of Southern Utah*	*Snow College*
Clerical and Office Occupations	110	80		20			47
Aircraft		40	380				86
Agricultural and Related			48				
Auto Mechanics and Related	245	180	256	20	31	64	31
Electricity and Electronics	270	120	191	15	8	38	13
Merchandising and Sales	20						
Construction Trades	120	100				35	
Metal Working	240	200	110		17	82	9
Wood Working		20				18	
Graphic Arts	49	21		15			
Drafting	215	100	29	10	21	55	20
Food Services						12	
Clothing Services and Heavy Duty Sewing		60	122			79	
Health Services	300	62	60			15	
Data Processing	80	40	87			16	7
Other	90	40					
Police Officer						30	
Cosmetology	60		48		27		

grams create greater competition for space, equipment, and attention.

It would appear that the junior colleges (Dixie College and Snow College) and the state colleges (College of Eastern Utah and College of Southern Utah) might serve the vocational-technical education needs of their areas by expanding their curricular offerings.

Vocational-technical education programs beyond the high school become more important as mechanization and automation of business and industry are extended. The skills and knowledge related to operation, maintenance, and production of modern equipment require a maturity of the student and a length of training that often are not possible for high school students. There is considerable evidence that both a quantitative and a qualitative change is inevitable for this part of the vocational education spectrum. Extreme care should be given to relating these programs to the labor market demands of numbers needed and curriculum content. Each of the post-secondary centers should provide counseling services, placement services, and coordination with labor market changes. As a means of evaluation of these programs, the employment experiences of all students should be followed for five years after the students leave the school.

Programs for Youth and Adults at Work

Two factors make it necessary to provide vocational-technical education for youth and adults who are working or have been working: (1) The rapid changes in equipment, methods and products in the economy make it necessary for most workers to update, upgrade or retrain themselves constantly if they are to maintain employment security; and (2) many persons enter the labor market later in life and find it necessary to learn a set of skills and knowledge to become employable.

The first federal legislation for vocational education enacted in 1917 recognized this need. All subsequent legislation for vocational education has made continuing education a provision of the act. The programs are often for short periods and are often provided in the evening hours. The Manpower Development and Training Act of 1962 recognized the extensive need for retraining and has made hundreds of thousands employable by this type of program.

Table 4 gives the programs of this nature now in operation in Utah. These programs are usually associated with similar vocational programs which are being taught as pre-employment courses for younger persons. The courses are usually shorter in length and more intensive but they often need the same equipment and the same teacher competencies. These types of courses have been quite effective in increasing employability or improving employment security. Such courses are a requirement of the standard apprenticeship program. They have been very widely used in agricultural training for the adult or young farmer, in distributive education, and in trade and industrial training. The Smith-Hughes Act originally restricted this training to courses related to the employment of the person in training—thus no pre-employment programs were permitted under this legislation.

TABLE 4

AVAILABILITY OF VOCATIONAL-TECHNICAL CURRICULA FOR YOUTH OR ADULTS AT WORK—1965-66

	Number of Students Enrolled											
	Programs in High Schools			*Programs in Trade Technical Institutes*			*Programs in Junior Colleges*			*Programs in Colleges or Universities*		
Occupational Category	*Apprenticeship*	*M.D.T.A.*	*Other*	*Apprenticeship*	*M.D.T.A.*	*Other*	*Apprenticeship*	*M.D.T.A.*	*Other*	*Apprenticeship*	*M.D.T.A.*	*Other*
Clerical and Office Occupations		30			25			160				
Agricultural and Related			1,060									27
Auto Mechanics and Related		45			62	145		20	60		24	60
Electricity and Electronics		20		182		282			30			60
Merchandising and Sales												
Construction Trades				337	41	114						23
Metal Working				304		281			20	30		15
Wood Working				88								
Graphic Arts						59						
Drafting						44						15
Food Services												51
Clothing Services						105						120
Health Services						60					60	
Data Processing						27						226
Other		155		6	45							778

ORGANIZATION FOR ADMINISTRATION, SUPERVISION, AND INNOVATION

The program of instruction in vocational-technical education in Utah is provided in 80 of the 81 high schools in 40 school districts and 7 post-secondary institutions. In such a diversity of institutions located throughout the state, it is apparent that some type of organization is necessary for the effective and efficient distribution of funds, determination of instructional practices, evaluation of programs, planning for innovation, etc.

It is recognized that as state and federal laws, regulations, and funds are involved certain auditing or inspectional type of services are necessary. It is also recognized that competent and experienced persons viewing program activities in many different situations involving specialized skills can be of service to teachers and local school district administrators.

Historical Development of Administrative and Supervisory Organization

The Smith-Hughes Act of 1917 provided funds under three occupational categories—agriculture, trades and industry, and home economics. Certain auditing functions were necessarily related to these three occupational categories. The programs which developed were in general quite unique and it became logical to develop an organization for administration and supervision of the program. As subsequent federal legislation was enacted, additional occupational categories were established. Distributive education came in a legislative act of 1934. This area was also quite unique in relation to the previous legislative occupational categories. Legislation in 1956 established a number of additional occupational categories, provided funds, and made certain program definitions which were *not* completely unique. For instance, the Health Amendments Act of 1956 provided for "Vocational Education in Practical Nurse Training." But some nurse training had already been developed under programs in "Vocational Home Economics" and in "Trade and Industrial Education." The NDEA legislation of 1958 provided funds for "training of individuals . . . as highly skilled technicians in recognized occupations requiring scientific knowledge." Programs in Trade and Industrial Education had been doing this for many years. As a third example, the Manpower Development and Training Act of 1962 provided for the training of unemployed or underemployed persons to update, upgrade, or retrain them for better employment opportunities. Much of this type of program had for many years been an activity of "Trade and Industrial Education." Thus, the evolving programs fell partly within and partly outside the established administrative organization.

During the period that federal legislation was changing some of the traditional patterns of designated occupational categories, the employment pattern in many occupations was changing because of extensive automation and mechanization. For instance, agriculture was tremendously changed by new fertilizers, more irrigation, and extensive mechanization. Considerable overlapping between many agricultural and trade training programs resulted as many farm workers had to know much more about "auto mechanics" than they did about agriculture. There developed also similar overlapping between distributive education and agriculture, trade and industrial education and technician training, health occupations, home economics, and the like.

In 1963 the United States Congress enacted a completely new federal law (PL 88-210) with no occupational categories designated. The Smith-Hughes Act (1917) and the George-Barden Act (1946) continued as laws with their occupational categories.

An Organizational Plan for Utah

The occupational categories which served vocational education so well in maintaining standards under very limited federal funds, rigid occupational categories, and a more simple labor market condition may now be a hindrance if used as a framework for administration and supervision. One of the most obvious needs in vocational-technical education today is innovation—the preparation and implementation of change. The eternal problem is how to produce desirable change without destroying the achievements purchased by experience. The objective should be to plan for change, being limited by facts but not bound by tradition, and a major concern should be for flexibility and capability of change rather than a search for mere differentness.

To produce plans for change requires considerable time for study, thought, and development activities. One should start with the present—activities, persons, and environmental conditions. As the activities of the Utah State Division of Vocational-Technical Education were studied and the staff was interviewed, it was evident that Utah has been producing change throughout the years. Many of the staff have exerted leadership and promoted newer patterns of operation. Only a casual look at the tremendous growth in number and type of vocational programs indicates major achievements in changing to new conditions and meeting new needs.

The staff and activities within the State Department of Public Instruction can be the most effective forces for the promotion of more efficient vocational-technical education services. The State Division must consist of persons with special competencies, the ability to provide leadership and hold the confidence of teachers, administrators, and fellow staff members. But in addition to these factors they must have the time for study, reflective thinking, and creative development. It is in relation to this last criterion that the State Division of Vocational-Technical Education is lacking. No major change in organization and administration would be suggested if the staff is to be limited to the present numbers. It is felt, however, that the effectiveness and efficiency of vocational education services could be achieved by relieving the subject area resource specialists from many of the "mechanics of operation," which are primarily administrative and ministerial in nature.

Chart A outlines the survey staff's recommendation for an organization to provide administrative, supervisory, and innovative services. The suggested organization differs from the present administrative plan in several ways:

1. It assigns the Director of Vocational-Technical Education to a position as an assistant superintendent with direct access to the State Superintendent of Public Instruction. The survey staff has not studied the organization of the State Department of Public Instruction since this was not within the scope of the assignment. It is noted, however, that departmental responsibilities are coordinated through two deputy superintendents—one for Instruction and one for Business Affairs. Also, it has been noted that the vocational instructional program in secondary schools is coordinated throughout the high schools of the state as one segment of secondary education. In similar fashion, the finance and business aspects of vocational education are parts of a larger whole. Thus, the proposal to establish the assistant superintendency to afford a direct policy channel to the State Superintendent is made upon the assumption that the

operational programs in vocational-technical education will continue to be coordinated through the deputy superintendents as are all other segments of the public school enterprise.

Conversations with the State Superintendent revealed that he knew many of the details concerning the operation of the vocational division and had an intense interest in its activities. He is evidently able in the relatively small state department to secure the information he needs. In general, however, it is more difficult for a state superintendent to obtain accurate and complete information unless he has direct access to the state director. A state director of vocational education has extensive contacts with business, industry, labor, employment conditions, as well as the federal government. The contacts can be quite helpful to the state education program if the state superintendent is aware of the information that results from these contacts. Often the decision-making process can be much more effective if these facts are known.

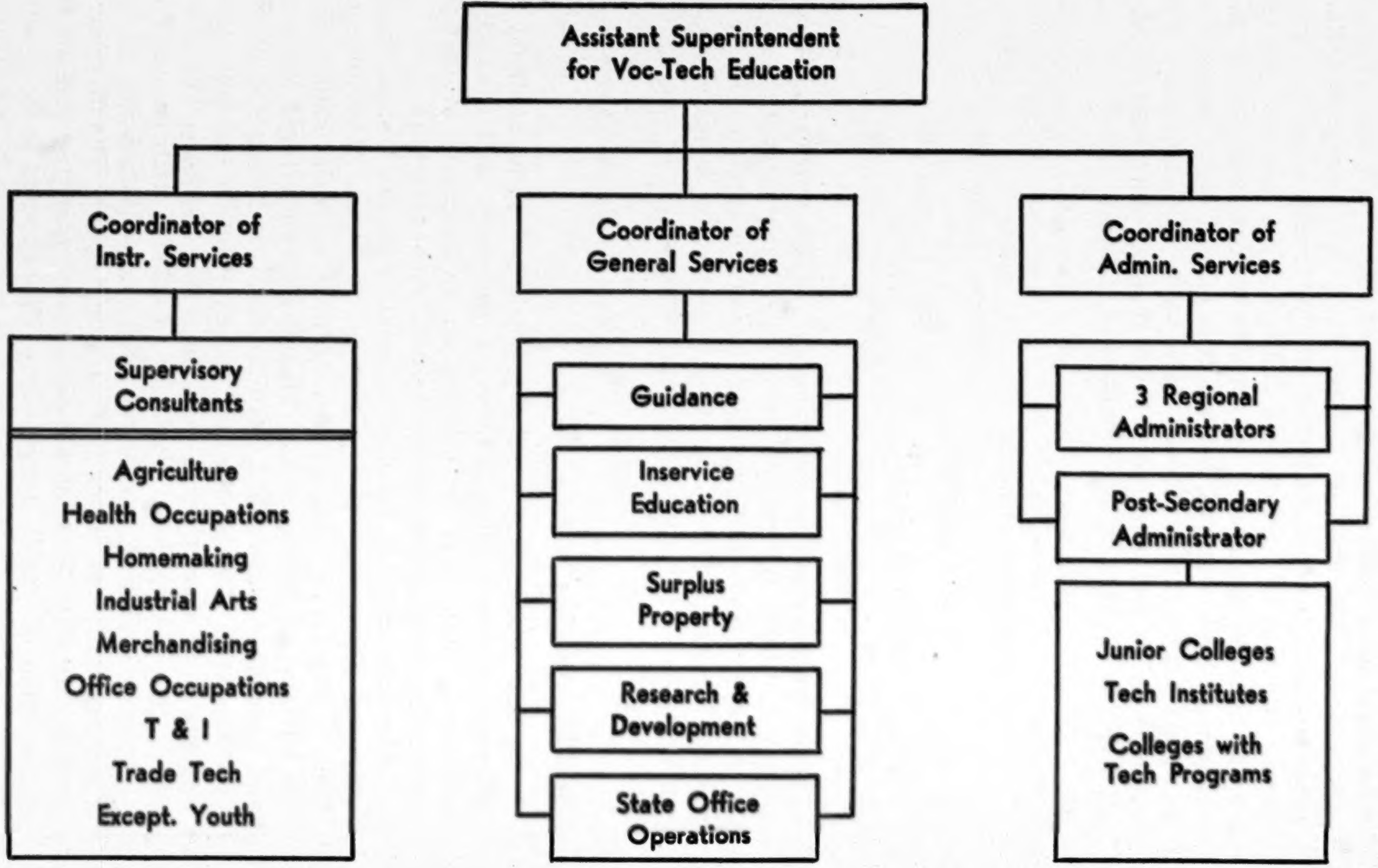
2. This organization plan places certain positions as line officers and certain positions as staff officers. The objective is to place four persons as administrative officers who will have the responsibility for the auditing, inspection, reporting, and operational activities. Three of these will be regional, and one is for post-high school programs. It is expected that this plan would concentrate the "housekeeping" activities and relieve the other officers for other activities.

3. This organization plan places the specialists as staff officers with the time and an environment in which to develop curricula, maintain contacts with specific occupational activities, and be creative in evaluating, assisting, and developing pilot activities.

4. This plan suggests a number of new specialist positions (Health Occupations, Homemaking Related Occupations, and Programs for Youth with Special Needs). The positions are suggested because of the great interest in and employment opportunities for these types of occupations. It also relieves the specialist in Trade and Industrial Education who now covers a diversity of occupations which is entirely too extensive. A position related to Health Occupations now exists in the person of a nursing education specialist who is performing excellent service as a less than full-time employee.

To facilitate and make more effective the administration and supervision of vocational education programs, the state should be divided into three geographical regions and one in-

CHART A
Proposed Divisional Organization


Assistant Superintendent for Voc-Tech Education
Coordinator of Instr. Services
Coordinator of General Services
Coordinator of Admin. Services
Supervisory Consultants
Agriculture
Health Occupations
Homemaking
Industrial Arts
Merchandising
Office Occupations
T & I
Trade Tech
Except. Youth
Guidance
Inservice Education
Surplus Property
Research & Development
State Office Operations
3 Regional Administrators
Post-Secondary Administrator
Junior Colleges
Tech Institutes
Colleges with Tech Programs

structional area comprised of post-secondary schools, with an administrator for each of the regions. It is suggested that post-secondary institutions be one administrative area. It is suggested also that the counties of Juab, Sanpete, Carbon, Grand, and all counties south of these counties be one region; that the counties of Utah, Summit, and counties east of these counties be a second region; that Tooele, Salt Lake, Morgan, Rich, and counties north and west be a third region. The relative size and contour of these regions would be as follows:

Regions	*Number of Institutions*	*Approximate Enrollment*	*Number of Counties*
I	31 High Schools	3,600 Grades 11 and 12	15
II	27 High Schools	11,000 Grades 11 and 12	6
III	23 High Schools	17,000 Grades 11 and 12	8
IV	7 Institutions		29

A more careful study of the topography and transportation patterns might indicate a more practical regional organization.

A major reason for providing regional administrators is to release the specialists from enough management activities to enable them to function much more extensively in curriculum development.

Ancillary Services

Certain services are generally considered to be ancillary to the more common administrative, supervisory, and innovative activities. These may be categorized as research, evaluation, curriculum development, guidance, and teacher training.

The state of Utah received a grant from the United States Office of Education to establish a "Research Coordinating Unit." The funds were used to establish a special staff within the Division of Research and Planning to encourage, promote, and coordinate research related to vocational-technical education. Research must be constant and extensive if the innovation is going to be more than a "trial and error" process. The director of this service must be closely associated with the staff of vocational education, the total program of education in the state, and activities of the RCU in other states. The director is now located with the central research and planning staff of the Department of Public Instruction. This appears to be a satisfactory arrangement and should continue to be if the director maintains close contact with the vocational staff and their problems. Systematic research in Vocational-Technical Education is so new that innovation in vocational research is probably more important than in any other activity. Certainly no other emphasis is more timely. For this reason, research should be continued as an activity in vocational education regardless of the future of the Utah Research Coordinating Unit now financed by a USOE grant. Without such services the specialists will find it difficult or impossible to perform in an effective manner.

Evaluation should be a major function of any research staff. However, much evaluative information can be available to the regional administrators and the specialists. This information should be collected, organized, and used to assist with any part of the administrative-supervisory function. Particular attention should be given to all those students who leave a vocational program in a follow-up for five years beyond their time of leaving the program.

A person now serves as a vocational guidance specialist within the staff of general guidance services. This appears to be a satisfactory arrangement and should be continued. However, care should be taken that such a person does not get so far removed from the vocational education staff that he can not be of maximum assistance to the vocational aspect of the guidance spectrum.

There is relatively little instructional direction for vocational teachers. The Latin, history, science, etc. teacher has many textbooks and instructional aids from which to choose. Further, such materials are being constantly reviewed, revised, and republished. Often the vocational teacher with perhaps less training and experience has little if any material from which to choose instructional aids and less guidance in judicial choices.

A curriculum development laboratory should be developed with materials and personnel available to revise efficiently and develop instructional materials. Often persons from the field will have to be employed for short periods to help with instructional materials for unique skills.

No program of instruction is better than its teachers. Teacher training, preservice and inservice, is very important. This study elsewhere indicates that twice as many teachers are graduated each year in Utah in Home Economics as are needed in the state. It is likely that little if any attention is given in the Home Economics major to occupations requiring skills related to homemaking. The only way to overcome such deficiencies is to provide specialists who have the time and ability to work closely with the teacher training institutions.

Teacher training for trade, industrial, and service occupations is very difficult, for most persons with competencies in these occupations have little if any college training. These occupations, as explained earlier, have very few instructional aids to help teachers. There is some evidence that not all of Utah's industrial education teachers have either the trade experience or teacher training to assure that the skills and knowledge are being most effectively taught. Sufficient staff must be provided to assure that both preservice and inservice training is available to secure and maintain quality instruction.

MAJOR RECOMMENDATIONS

1. **The academic and general subjects of reading, writing, mathematics, industrial arts, homemaking, and science should be recognized as prevocational, and continuous efforts should be exerted to make these courses serve this purpose more effectively.** No person is able to get or hold a satisfactory job unless he has the ability to read, write, and use numerical concepts; nor is he likely to be a satisfactory employee unless he has achieved the ability to live and work with others, and, in general, be a good citizen. These are not specific vocational skills, but they are essential to job security in the labor market.

2. **All high schools with an enrollment of more than 300 students should be comprehensive high schools.** If vocational education is to reach the high school student, vocational curricula must be available in the high schools of the residence area of these youth, and it is very difficult to provide vocational programs in small high schools.

3. **A selected high school should be developed into an area vocational school in each of the counties of Washington, Box Elder, Cache, and Weber.** These area schools are needed to supplement the area school activities now performed by the trade technical institutes at Salt Lake City and Provo and by Richfield High School.

4. **Vocational programs in the high schools should begin with Grade 11.** General education is so important for a vocational education foundation and for citizenship that it is highly desirable that major attention be given to academic subjects in the earlier high school years and specific vocational programs be postponed until Grade 11.

5. **The position of Specialist for Programs for Youth and Adults with Special Needs should be established in the State Division of Vocational-Technical Education.** The duties of this position would be similar to those of other specialists in curriculum areas and would deal, chiefly, with promoting and developing curricula and in providing consultative services for high schools and institutions maintaining programs for youth and adults with special needs.

6. **The area vocational schools should provide some vocational-technical educational programs at the post-secondary level.** These programs beyond the high school become more important as mechanization and automation of business and industry are extended.

7. **For more effective administration and supervision of vocational education programs, the state should be divided into three geographical regions and one instructional area comprised of the post-secondary schools, with an administrative officer appointed for each division.** This organizational pattern would be as follows: Region 1—Juab, Sanpete, Carbon, Grand, and all counties south of these; Region 2—Utah, Summit, and counties east of these; Region 3—Tooele, Salt Lake, Morgan, Rich, and counties north and west of these.

8. **Research should be continued as an activity in vocational education regardless of the future of the Utah Research Coordinating Unit now financed by a USOE grant.** Without such services, the specialist will find it difficult or impossible to perform in an effective manner.

9. **The position of Vocational Guidance Specialist within the general guidance staff at the state level should be maintained.**

10. **A curriculum development laboratory should be set up with materials and personnel available to revise and develop instructional materials.** There is relatively little instructional direction for vocational teachers. These teachers, who oftentimes have less training and experience than other teachers, need both materials from which to choose instructional aids and guidance in making their choices.

11. **Sufficient staff must be provided to assure that both preservice and inservice training for teachers is available.** Teacher training—both preservice and inservice—is very important, for no program of instruction is better than its teachers.

12. **New positions of Specialist for Health Occupations and**

Specialist for Homemaking Related Occupations should be added to the consultant staff. The specialists for homemaking education and homemaking related occupations are recommended as two consultants although shown in the single area of "Homemaking" on the chart.

13. **The staffing plan of the Utah Division of Vocational-Technical Education should be modernized in accordance with trends in legislation and program changes since 1956.** Supervisory and administrative functions should be separate staff assignments. Subject area specialists should be relieved of administrative duties in order to devote full time to instructional leadership, teacher training, curriculum development, program innovations, and improvements in their respective fields. Administrative and management functions should be assigned to "line" personnel deployed on a regional basis to look after the ministerial details of all local vocational programs. Both line and staff branches should be coordinated by the state director, who should answer directly to the State Superintendent as his Assistant Superintendent for Vocational-Technical Education.

PART II—THE PROGRAMS

- Agriculture
- Distributive Education
- Industrial Arts
- Trade and Industrial Education
- Trade and Technical Education
- Office Occupations
- Homemaking
- Guidance

CHAPTER 2

AGRICULTURAL EDUCATION

The Vocational Education Act of 1963 broadened the scope of high school and post-high school programs in agriculture. The programs now include vocational education for off-farm occupations. Primary consideration must be given to the fact that *agriculture is more than farming.*

Some estimates indicate that perhaps 35 per cent of the national labor force is employed in work "related" to agriculture. Certainly the producing, processing, marketing, distributing, and providing necessary services for agricultural products have concerns and implications for vocational education in agriculture, but it does not follow that the labor force so employed has a need for training and skill in agriculture. The 1960 federal census reported that 5.8 per cent of the total civilian labor force was employed in agriculture. Thus, a realistic estimate of those who might have an ultimate stake in vocational education in agriculture might be around 20 per cent.

The importance of the total agricultural industry to the economy of the state of Utah is easier to establish. Recent data show that the 1965 gross income from Utah farm products alone was 181.4 million dollars.[1] Sales to Utah farmers by agricultural business firms in 1964 totaled 90.2 million dollars, while total farm expenses amounted to 148.1 million. These data do not include services and sales of horticultural and other agricultural products to urban and suburban homeowners.

The gross income per Utah farm increased from an average of $10,880 in 1964 to $12,092 in 1965. The total number of farms in Utah in 1965 was 15,000, with an average capital investment of $47,000 per farm. The number and value of agriculturally-related businesses in Utah is not known; but the total assets of $705 million for Utah farms alone are impressive. Therefore, in spite of the facts that (1) the number of farms continues to decrease in accordance with the national pattern, (2) the acreage per farm and total acreage in farming are increasing, and (3) the proportion of the labor force engaged in farming continues to decline, agriculture is one of the state's most important and significant industries. The expanding programs in vocational education for agricultural occupations can enhance their importance to the people and to the economy of the state.

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[1] 1965 Farm Income from Statistical Reporting Service for Utah and Nevada, USDA.

AGRICULTURAL EDUCATION PERSONNEL AND PROGRAMS

Utah presently has a total of 55 teachers of vocational agriculture providing instruction for 3,410 high school students and 1,040 young and adult farmers for a total of 4,450 individuals served by such programs. The number of students per department is about 64, which is considerably higher than that for surrounding states. Table 5 gives the enrollment in these programs by years for the period. It may be seen that current high school and young and adult farmer enrollment is the highest of the last six-year period. Thirty-eight of the 55 teachers of vocational agriculture are conducting evening classes for young and/or adult farmers during the current year. Historically, the state's adult and young farmer education program has been one of the strongest in the Mountain States Area.

TABLE 5

UTAH SECONDARY SCHOOL VOCATIONAL AGRICULTURE AND ADULT FARMER ENROLLMENTS FOR THE PERIOD 1960-1966

Year	*High School Vo-Ag Enrollment*	*Young and Adult Farmer Enrollment*	*Total*
1960-61	3,095	797	3,892
1961-62	3,265	769	4,034
1962-63	3,154	874	4,028
1963-64	3,344	968	4,312
1964-65	3,299	993	4,091
1965-66	3,410	1,040 est.	4,450

Fifteen teachers, or 27 per cent of the total 55 teachers, have earned master's degrees. The average number of years of experience in teaching is 12, with a range of from one to 34 years.

The current state budget for Agricultural Education, excluding salary and other administrative costs for state supervision, totaled $52,252. Available evidence seems to indicate that agricultural education has not benefited appreciably from funds available to the state under additional monies provided by the Vocational Act of 1963.

The state supervisor estimated a need for $25,000 beyond the present budget to maintain and improve existing programs and to establish post-high school programs of a vocational-technical nature in agriculture. Under present state and federal reimbursement procedures to local high schools for programs in Agricultural Education, the major share of total funds is provided by sources other than state and federal vocational funds. Adult classes which are financed by state and federal funds are an exception.

State appropriations for Agricultural Education are made to local districts on the same basis as that for other courses in the high school curriculum. The finance formula provides one distribution unit (DU) for each 27 pupils in average daily attendance (ADA). No additional DU consideration is given for classes in vocational agriculture except for the summer program which provides an additional one-third DU, based upon 60 students, with supervised work experience, per teacher. Young and adult farmers count at a rate of one-half and one-fourth, respectively, in equating the number of students. The 27 ADA figure and the 60 student quota for full summer reimbursement have, in many cases, created a heavy teacher load which seems to be excessive. This is true if individual instruction and supervision in the classroom, on the farm, or in agricultural businesses and firms, and in agricultural mechanics shop instruction are to be accomplished in an effective manner. These present standards would seem to parallel or approach those held for the size of nonvocational classes.

CONVENTIONAL PROGRAMS

Multi-teacher programs visited were offering classes in agricultural science and classes in agricultural mechanics. Students in both classes were conducting supervised farming programs. However, if students were enrolled only in agricultural science they received no scheduled instruction in agricultural mechanics, and if enrolled only in agricultural mechanics, they were receiving only incidental instruction in crop and livestock production, farm management, and other subject areas.

The procedure of providing separate types of classes within the same school seems to need reappraisal. If the objective of these classes is to prepare students for production in agriculture, then consideration should be given to an integrated curriculum with large classes divided equally between teachers of agricultural science and agricultural mechanics, and with students rotated every six weeks, or some other appropriate period of time. This procedure would insure students entering production agriculture some instruction in both crop and livestock production, management, and other areas, as well as some instruction in mechanics which would be needed in the care, operation, and maintenance of expensive machinery utilized in modern production agriculture.

If the programs are to be continued under the present organizational structure, the agricultural mechanics program should be more specialized in the junior and senior years to prepare students for an occupation or related occupations in agricultural mechanics such as tractor mechanics, parts men in an agricultural equipment dealership, or as small engine specialists in the repair of small gasoline engines common to lawn and garden equipment, chain saws, and the like.

NEW PROGRAMS IN AGRICULTURAL (OFF-FARM) OCCUPATIONS

Visits to high school departments of vocational agriculture revealed that at least six of the eight schools visited were making immediate plans to begin new programs in off-farm agricultural occupations which would include placement for occupational experience. Bear River High School had in operation a pilot program which included seven students placed for such experience and training. Bingham High School has an excellent permanent greenhouse for the development of a horticultural emphasis and for use by biological science classes.

Since the Salt Lake City area may provide a potential for the development of high school programs in landscape gardening, ornamental horticulture, and other types of programs, plans should be formulated to explore with Salt Lake City firms and school administrators the need for these new programs. FHA estimates the cost of landscaping for a new home to be 10 per cent of the total value of the home. Lawn care and the care and management of flowers, ornamentals, golf grounds, and park management provide potentials for such occupational programs. Boston, Cleveland, Los Angeles, New York, and many other metropolitan areas have developed these programs.

Utah teachers seem to be well prepared to accept the innovation of new programs in off-farm agricultural occupations. However, visitation to schools revealed that immediate planning and inservice education *must be accomplished* to assist teachers in implementing new programs. Teachers need help especially in planning with cooperating agricultural businesses and firms the kinds and sequences of desirable occupational experiences which students need for ultimate entry into these occupations. Since a number of high schools have indicated plans to construct greenhouses for the development of horticultural programs, teachers, administrators, and the state supervisor should develop cooperatively approved plans for the location of such facilities, types of construction, desired sizes for various student enrollments to be served, heating and cooling equipment, and kinds of curricula and experiences which students need to enter horticultural type occupations.

SPECIALIZED POST-HIGH SCHOOL VOCATIONAL PROGRAMS IN AGRICULTURAL EDUCATION

Utah does not now have offerings at the post-high school level in off-farm agricultural occupations designed for less than a baccalaureate degree. At least one (possibly two) such post-high school programs should be developed at an appropriate location(s) in the state. One- and two-year curricula should be planned and implemented on the basis of occupations revealing greatest manpower needs and opportunity. The state supervisor indicated that at least $20,000 would be needed to implement such programs. This figure may be much too conservative, depending upon the program to be developed.

Visitation to Utah schools and the completed questionnaires received from teachers and administrators indicated that some administrators and guidance personnel are not aware of the opportunity for new programs in Agricultural Education. It is realized that the adoption and inauguration of innovations in education of any nature take time. Further, the limited time available to a state staff indicates that such a task cannot be accomplished solely by state supervision. Planning should be conducted with state vocational guidance personnel, local guidance staff members, and teachers to determine ways in which local guidance programs can be utilized to provide general principles of career orientation, to identify student interests, to help determine aptitudes, and to provide other assistance. Local guidance personnel could provide much help in the instructional program in agricultural occupations, but first must have a basic understanding of the nature and objectives of these new programs and how they differ from conventional ones. A brief but well prepared brochure should be developed for use by counselors, administrators, teachers, parents, agricultural businesses, prospective students, and others. Such a brochure should emphasize the needs and opportunities in both production and off-farm agricultural occupations.

TEACHER EDUCATION

A review of the teacher education program in Agricultural Education at Utah State University revealed that courses are well planned and detailed syllabi are available. While two professional faculty members staff the departmental program, only one faculty member teaches professional courses in agricultural education. The second staff member is conducting what is probably the most outstanding program in agricultural engineering or mechanics in the Western State Area. However, since the professor teaching agricultural engineering provides instruction only in this area, students at the undergraduate and graduate levels are exposed to a single point of view and philosophy in professional Agricultural Education courses.

An additional faculty member should be added to the department to do limited teaching at the undergraduate and/or graduate levels. This would afford students an exposure to at least two faculty members teaching complementary professional courses in Agricultural Education. In addition, since a limited supervisory staff exists at the state level, such a faculty member should be utilized in (1) needed research and pilot programs, (2) inservice education, and (3) the development of curriculum and teaching materials.

A graduate assistant, with a stipend of $1,800, is assigned full-time teaching responsibilities in agricultural mechanics. A second graduate assistantship should be added, with possible assignments in teaching methodology, materials development, and research.

The stipend of $1,800 cannot be expected to attract teachers in the field to return for a full year of study, and it is only about one-half as much as that paid by other universities. Stipends for assistantships must be increased if the best use is to be made of them.

Formal course offerings are not provided in extension education. Since educational preparation for teaching and for working in extension can and should be complementary, possibilities for adding extension education to the undergraduate and graduate levels should be considered by the Department of Agricultural Education and other appropriate officials at Utah State University. In addition to the above changes needed for improvement in agricultural education at Utah State University, a class for freshman orientation should be added to the curriculum.

INSERVICE EDUCATION

Past accomplishments in Utah through inservice education are commendable. A variety of short, intensive workshops have been conducted throughout the state. However, systematic long-range planning was not in evidence. Regularly scheduled joint staff meetings between the two professors of Agricultural Education and the State Supervisor of Agricultural Education should be held at designated times throughout the year to plan and coordinate programs and activities and to plan for needed inservice education for teachers on a long-term basis. Programs should be projected for a three- or four-year period, to be modified only in case of the appearance of some critical and unpredictable need which would necessitate adjustments.

The majority of the 63 per cent of the teachers who do not have master's degrees should be encouraged to participate in a planned degree program. Cooperative planning among teachers, teacher educators, administrators, and the state supervisor should be developed to accomplish this objective.

SUPERVISION

State supervision in Utah for Agricultural Education is presently limited to one professional staff member. Considering this limitation in staff, a most creditable job has been done. But the vast travel necessary in supervising 55 teachers throughout the state makes it unreasonable to assume that the supervisor has the time required to develop significant teaching and curriculum materials. In another section of this report recommendations have been made which have implications for this latter responsibility.

INSTRUCTIONAL MATERIALS

Some of the local school departmental libraries visited were inadequate. Local and state financial support should be provided to purchase necessary references basic to local needs. A list of free or inexpensive publications appropriate for the state should be developed. The present formula for reimbursement to local schools for instructional supplies may need further consideration. Perhaps a plan for employing the uniform formula after critical needs have been accommodated could be developed. In this way departments with poor libraries could be given additional assistance in their efforts to come up to reasonable standards.

It was admitted by teachers visited, with one exception, that they were making little use of overhead projectuals, even though some had overhead projectors in their rooms. Inservice workshops or graduate courses should be planned and conducted to help teachers make more effective use of these and other recent techniques in instruction.

ATTITUDES TOWARD VOCATIONAL AGRICULTURE

A questionnaire was sent to all superintendents, principals, and agriculture teachers in systems where there are departments of vocational agriculture. Responses were received from 35 principals, 11 superintendents, and 37 teachers of agriculture. The questionnaire asked for assessments of the vocational agriculture programs in the schools with which the respondents were associated, and the responses have been tabulated and appear in Tables 3-14. A thorough study of these responses should provide some definite guidelines for future inservice education and general program evaluation among personnel in the vocational agriculture departments, school administrators, counselors, and others with an interest in this field.

Courses of Study and Visitation

Ten of the 11 superintendents indicated that their teachers submitted an annual program or course of study for information and/or approval. Correspondingly, 28 principals (of 36) indicated they received copies of the instructional program. One of the principals not receiving a copy of the instructional program indicated he was not interested in reviewing the annual instructional program. Five fewer teachers (23) submitted summer activities schedules than did so for the instructional program in the fall and spring.

Sixteen high school principals had been invited to accompany the high school teacher on supervisory visits while 19 had not been invited. Four of the 11 responding superintendents had been invited to make such visits. Most superintendents and principals had not made supervisory visits with teachers.

From the data in Tables 6, 7, and 8 it may be seen that six principals and two superintendents did not feel as well informed about vocational agriculture as other subjects, while two each felt somewhat better informed. Six principals and two superintendents felt their guidance counselors were not as well informed about the vocational agriculture as they were about other subjects.

Responses to the questionnaire also revealed that 14 teachers felt that their guidance counselors were not well informed about the program and objectives of vocational agriculture. A primary responsibility for informing the counselor rests with the local teacher. These findings imply a need for teachers to devote more efforts to bridge the gap which teachers feel exists. Statewide efforts emphasized in this report suggest other possible methods and procedures.

TABLE 6

DEGREE TO WHICH PRINCIPALS AND SUPERINTENDENTS FELT INFORMED CONCERNING VO-AG PROGRAM AND OBJECTIVES

Item	*Number of Principals Responding*	*Number of Superintendents Responding*
Not as well as other high school subjects	6	2
About the same as other high school subjects	25	7
Somewhat better than other high school subjects	2	2
Much better than other high school subjects		
No Response	2	

TABLE 7

DEGREE TO WHICH PRINCIPALS AND SUPERINTENDENTS FELT THAT THEIR HIGH SCHOOL GUIDANCE COUNSELORS WERE INFORMED CONCERNING VO-AG PROGRAM AND OBJECTIVES

Item	*Number of Principals Responding*	*Number of Superintendents Responding*
Not as well as other high school subjects	6	2
About the same as other high school subjects	25	7
Somewhat better than other high school subjects	2	1
Much better than other high school subjects		1
No Response	2	

TABLE 8

DEGREE TO WHICH VO-AG TEACHERS FELT PRINCIPALS AND GUIDANCE COUNSELORS WERE INFORMED CONCERNING VO-AG PROGRAM AND OBJECTIVES

Item	*High School Principal as Viewed by Teacher*	*Counselor as Viewed by Teacher*
Not as well as other high school subjects	6	14
About the same as other high school subjects	12	14
Somewhat better than other high school subjects	19	7
Much better than other high school subjects		1
No Response		1

Teacher Effectiveness

Teachers were asked to rate their own effectiveness. High school principals and superintendents were also asked to rate the effectiveness of their teachers of vocational agriculture. Data in Table 9 present teachers', principals', and superintendents' responses.

TABLE 9

TEACHERS', PRINCIPALS', AND SUPERINTENDENTS' RATINGS OF VO-AG TEACHER EFFECTIVENESS

Item	*Teachers' Self-Ratings*	*Principals' Ratings of Teachers*	*Superintendents' Ratings of Teachers*
Much less effective than other high school teachers		1	
Somewhat less effective than other high school teachers		3	1
About as effective as other high school teachers	16	15	6
More effective than other high school teachers	20	12	4
Much more effective than other high school teachers	1	4	

As might be anticipated, data in Table 9 show that teachers rated themselves higher than did administrators. It may be seen, however, that principals and superintendents predominantly rated teachers of vocational agriculture as effective as or more effective than other high school teachers.

Young and Adult Farmer Education

Table 10 presents teachers', principals', and superintendents' ratings as to the importance of young and adult farmer programs. A review of the teachers' responses revealed that those teachers who conducted young and adult farmer programs generally rated the programs higher than did teachers who were not conducting such classes. Administrators whose teachers were conducting such programs rated this item higher than did administrators who did not have local programs of this type.

TABLE 10

TEACHERS', PRINCIPALS', AND SUPERINTENDENTS' RATINGS OF YOUNG AND ADULT FARMER PROGRAMS

Item	*Teachers' Ratings*	*Principals' Ratings*	*Superintendents' Ratings*
More important than regular high school program of vocational agriculture	3	1	
Just as important as the regular high school program of vocational agriculture	17	10	5
Important—but not as important as the regular high school program of vocational agriculture	16	20	6
Not important	1	2	
No Response		2	

Teacher Evaluations of Local Programs

Items of much concern, implied from the preceding data, are instructional supplies, travel budget, shop equipment and facilities, and visitations to students. (See Table 11.) Almost one-fourth of the teachers responding did not feel their program image was adequate and felt their relations with the guidance counselor needed improvement.

Program Strengths and Weaknesses

Teachers, principals, and superintendents were asked to indicate major strengths and weaknesses of their local programs. As shown in Tables 12-17, teachers' responses were more extensive as to program strengths and weaknesses.

TABLE 11

Teacher Evaluations of Local Programs

Item	*Very Adequate*	*Adequate*	*Not Quite Adequate*	*Totally-Inadequate*	*No Response*
Travel budget	2	20	15		
Instructional supplies	4	7	22	3	1
Classroom facilities	6	16	10	5	
Shop equipment and facilities	1	10	14	8	4
Adult farmer program		15	11	6	5
Young farmer program		13	9	9	6
Summer program	3	28	5	1	
Visitation to students		22	14		1
Vo-Ag program image	3	21	11	1	1
Relations with guidance counselor	6	19	10	2	
Relations with high school principal	13	22	2		

TABLE 12

Local Program Strengths Viewed by Teachers

Item	*Teacher Responses*
Leadership training (FFA)	26
Agricultural mechanics	16
Students' supervised programs	12
Practical agricultural science	12
Livestock instruction	6
Crop instruction	4
Young and adult farmer programs	4
Placement of students	2
Nursery management	1
Soils instruction	1
Summer program	1
No Response	26

TABLE 13

LOCAL PROGRAM WEAKNESSES VIEWED BY TEACHERS

Item	*Teacher Responses*
Lack of equipment and facilities	13
Insufficient projects	13
Not enough time	10
Lack of cooperation in guidance	9
Poor public image	9
Poor students	8
Inadequate budget	5
Inadequate library	5
No young farmer program	5
Too far from school farm	2
No agricultural science	2
Lack of resource personnel	2
Too many areas to teach	1
Large classes	1
Too many supervisory visits to make	1
Too much paper work	1
Weak ornamental horticultural program	1
Farm building instruction	1
Irrigation instruction	1
Soils instruction	1
Lack of continuing study	1
No responses	20

TABLE 14

AREAS TEACHERS FELT MOST COMPETENT TO TEACH

Item	*Number of Times Indicated by Teachers*
Farm machines	15
Farm construction	5
Welding	10
Electricity	2
Livestock	26
Feeding	1
Vet. medicine	2
Soils	14
Landscaping and horticulture	6
Crops	17
FFA	6
Agricultural economics	4
Parliamentary procedure	1
Agricultural occupations	1

TABLE 15

AREAS TEACHERS FELT LEAST ABLE TO TEACH

Item	*Number of Times Indicated by Teachers*
Soil, water, and crops	13
Ornamental horticulture	4
Agricultural mechanics	12
Rural electrification	10
Farm buildings	6
Animal nutrition	8
Vet. science	5
Judging	1
Agricultural occupations	11
Farm management	8
Records	1
Farm law	2
Public speaking	1

TABLE 16

AREAS SUPERINTENDENTS AND PRINCIPALS FELT TO BE STRONGEST REGARDING VO-AG PROGRAM

Item	*Number of Superintendents' Responses*	*Number of Principals' Responses*
Good teacher	1	12
Leadership and citizenship training	8	4
Supervised farming program	4	7
Vocational orientation	5	5
Good training (general)	0	9
Ag mechanics program	1	8
Organization of overall program	4	5
Student interest and enthusiasm	4	5
FFA program	1	8
Agricultural science program	0	4
Good facilities and equipment	3	0
Community support	0	2
Public relations	0	2
Young and adult farmer program	0	2

TABLE 17

AREAS SUPERINTENDENTS AND PRINCIPALS FELT TO BE WEAKEST REGARDING VO-AG PROGRAMS

Item	*Number of Superintendents' Responses*	*Number of Principals' Responses*
Lack of ag occupations training	4	15
General instructional program	4	7
Student interest and enthusiasm	2	7
Lack of space	0	8
Organization of program	2	6
Local financial support	1	5
Potential and ability of students	2	4
Lack of proper facilities	2	4
Lack of community support	1	3
Rigidity of program	3	1
Too many shows, fairs, etc.	0	3
Young and adult farmer program	1	2
Agricultural mechanics program	1	2
Inadequate supplies	0	2
Supervised farming program	0	2
Teacher overloaded	0	2
Classroom and shop separated	0	1
Lack of storage space	0	1
Public relations	0	1
Ag science program	1	0

Open-end responses indicated that local administrators felt that more financial support through vocational funds was needed. Further, these responses suggested that administrators were not fully aware of new program dimensions available in Agricultural Education under the Vocational Education Act of 1963. A number of administrators indicated that they viewed high school programs as being limited to production agriculture.

Teachers and supervisory staff could well use the findings of this survey in assigning priorities to existing areas of concern and in planning appropriate measures to accommodate these priorities.

MAJOR RECOMMENDATIONS

1. Consideration should be given to providing an integrated high school curriculum, with large classes divided equally between the teachers of agricultural science and agricultural mechanics and with students rotated every six weeks, or some other appropriate period of time. This procedure would insure students entering production agriculture some instruction in both crop and livestock production, as well as some instruction in mechanics.

2. **Immediate plans should be made to assist teachers in implementing new programs in off-farm agricultural occupations.** Teachers need help especially in planning with cooperating agricultural businesses and firms the kinds and sequences of desirable occupational experiences which students need for ultimate entry into these occupations.

3. **At least one post-high school vocational program should be developed at an appropriate location in the state.** One- and two-year curricula should be planned and implemented on the basis of occupations revealing greatest manpower needs and opportunity.

4. **Brochures explaining new specialized post-high school vocational programs should be developed.** Such brochures should emphasize the needs and opportunities in both production and off-farm agricultural occupations.

5. **An additional faculty member should be added to the Utah State University Department of Agricultural Education.** This person should be utilized in (1) needed research and the development of pilot programs, (2) inservice education, (3) development of curriculum and teaching materials, and (4) limited teaching at the undergraduate and/or graduate levels.

6. **A second graduate assistantship should be added to the University's Department of Agricultural Education.** This position is needed to give assistance in teaching, materials development, and research.

7. **Stipends for assistantships at the University must be increased.** The present stipend of $1,800 cannot be expected to attract teachers in the field to return for a full year of study and is only about one-half as much as that paid by other universities.

8. **Possibilities for adding extension education to the undergraduate and graduate levels at the Utah State University should be considered by the Department of Agricultural Education and other appropriate officials.**

9. **A class of freshman orientation should be added to the Department of Agricultural Education of the University.**

10. **Inservice education needs and programs should be care-**

fully planned and projected for a three- or four-year period. Present practice reveals an absence of long-term planning. Cooperative planning between teacher education and the state supervisory staff should be scheduled and conducted at designated times throughout the year.

11. **Local and state financial support should be provided to purchase reference materials basic to local needs.**

CHAPTER 3

DISTRIBUTIVE EDUCATION

In Utah, definite efforts are being made to substitute the term "Marketing Education" for "Distributive Education." This move has been made primarily because of the difficulty experienced in explaining the term "distributive" both in an institutional and an occupational sense.

In the history of national legislation, the term Distributive Education is a definite part of the law, and appropriations of federal funds have been allied with this term. When DE funds were about to be eliminated in the early 1950's, it was evident then that some Congressmen were not aware of the term "DE" because other identifying terms (Retailing, Business Education, etc.) had been used at the local and state levels. When it was made clear that these programs were Distributive Education programs, the funds were restored.

Since considerable progress has been made nationally in defining the term Distributive Education for the general public (recent articles about DE have appeared in the *Saturday Evening Post*, prominent national newspapers, the *Readers Digest*, and numerous trade publications), and since the term is also well understood by donors who are businessmen supporting DECA in the youth program, it appears evident that definite progress has been made in identifying the distributive program.

In view of the history of development and progress in setting up and identifying the term Distributive Education, and because it has been accepted by many specialists as being synonymous with marketing, the term marketing should not be substituted for distribution. The term, however, may be used to advantage if added as a tagline to define distribution more clearly.

Another problem which ties in with the definition of DE and involves the matter of semantics (not Utah's problem alone —but a national one as well) is the selection of school subject titles at the various levels of instruction and their organization in sequence to show the continuity of the total DE program. High schools throughout the country use such course titles as Retail Selling, Retailing, Merchandising, DE, Principles of

Selling, Salesmanship, and in Utah the most frequent title is Marketing. However, marketing is used at the high school level and also at the post-secondary level. What should the course be called at the 11th grade, the 12th grade, and the 13th and 14th years of advanced work? Utah should experiment along this line and attempt to develop a sequence of offerings—a program of development—by identifying the subjects in such a way that they will be understood from the title, the type of school, the level of instruction, and the group to which the program is being offered.

In Utah, "service occupations" have been defined as those allied closely with distribution in the kind of job and the instruction offered. Though many service occupations are, in fact, a part of the distributive field, others are commonly identified as parts of other vocational areas. Utah has selected several service occupations and designed them as special occupations. Training for these special occupations (messenger service, routine order takers as clerks, routine and light office work, packers in shipping departments, dishwashers, shoe repair helpers, delivery service, truck driving, domestic service, and others) is directed to students limited in ability because of socioeconomic, academic, or social handicaps. Since the immediate goal of this program is to provide employment in special service occupations for students who need special attention and since DE has been the prime mover in the cooperative type of education, responsibility has been delegated to the DE specialist.

Utah is to be commended for taking positive leadership in this area of multi-service programming. Several pilot projects are underway, more are contemplated, and continued attention is planned in this area. The *Service Occupational Guide, July 1965,* describes the steps taken in establishing the program and is an excellent source of information showing the constructive action taken through the combined efforts of vocational education specialists, specialists in subject matter, and the involvement of teachers, counselors, principals, and university and state administrative officials.

Because of the failure in the past of the "central office" philosophy of supervision, these service programs must be followed up by direct visitation and "on the spot" supervision at the local level. For this to be done effectively, an assistant should be added to the distributive education consultant staff at the state level.

STATE LEADERSHIP

Most states have moved ahead year by year showing a steady growth in DE enrollment (except for a short period when they were affected by a cut in federal appropriations). The fact that Utah did not follow this pattern (statistics show that there were twice as many DE students in the cooperative program in Utah in 1940 as in 1960) was disturbing to the survey staff.

In studying the 1940-1960 history of DE state leadership in Utah, the staff reached the conclusion that the turnover in personnel and the varying philosophies regarding supervision of the program had a most inhibiting effect on the growth of the program. This is not to imply that the state supervisors were not fully in accord as to the value of the training and the importance of the educational program. Rather it was a matter of differing personalities and methods of operation.

Early in the program, the state plan permitted programs to be set up in communities, using local businessmen as instructors. This was not an uncommon practice in many parts of the country and generally met with success, when accompanied by close supervision and inservice teacher education.

It is the conclusion of the survey staff that the diminishing enrollment was not due to lack of intrinsic value in Distributive Education itself, but to a cumulative chain of events—the rapid turnover in state personnel, coupled with differences in personality, philosophy, and methods in providing needed assistance at the local level.

In recent years, especially since the 1963 Vocational Education Act, state leadership has been exerted to reinstate distributive cooperative programs and to initiate new programs in new centers, resulting in 33 high school cooperative programs in Utah, or three times as many as in 1963.

Once programs have been lost, their reinstatement often proves to be slow and difficult. The state supervisor has, however, moved rapidly, using the liberalizing provisions of the 1963 Act as a wedge. For example, the old vocational education acts required 15 hours a week for 30 weeks, or 450 hours a year, as a standard minimum requirement for on-the-job training for DE students. The new provision, now being used in the state of Utah, requires only 5 hours a week, or 150 hours a year, of on-the-job training. It is interesting to note, however, that what was originally considered a big hurdle in the way of on-the-job training hours for students under the old George-Barden Act actually proved to be a false alarm. Records of employment for students in these new programs show employment well over the 15-hour-week minimum, with few exceptions.

Elsewhere in this report it will be noted that there are other instances where the liberalizing opportunities provided under the 1963 Act may be used in setting up new programs. Unless care is taken in providing these new programs with follow-up visits in the schools, and some inducement is given to stabilize the tenure of the state supervisor, the enrollment in these new programs could easily drop again as it did in the past. The salary, travel expenses, and other monetary aspects of positions should be made attractive enough and sufficiently competitive with other states to hold successful supervisors in their Utah positions; and a DE specialist should be added to the state staff to lend assistance in follow-up consultant service to the many new DE programs now underway.

PROGRAM VISITATION

In order to get a cross-section view of the total program of Distributive Education and Service Occupations in Utah, visits were made to seven high schools, large and small, in various economic areas—urban, rural, wealthy, poor, and moderate prosperity. In these schools old and new programs were observed—some housed in new buildings and others in less favorable quarters—and interviews were held with principals, guidance counselors, and DE teacher-coordinators. Included in the visitations were the vocational-trade schools and the teacher education programs at the University of Utah.

The information gathered from the communities and personnel visited was used as the basis for discussion at the state office about communities not visited. Additional information was obtained through bulletins; periodical reports on student enrollment, placement, rates of pay, and hours worked; and enrollment figures by type of class and sex. Noted also was the arrangement with the guidance specialist that all vocational follow-up in Distributive Education, as required by the 1963 Act, would be carried out as the responsibility of the guidance department—a very satisfactory arrangement. The coordinators were found to range in experience from those who had been in the program for only a year to one who had been in the DE program since its inception.

These visitations were very beneficial because they presented opportunities to watch coordinators teach DE, view their methods of instruction, and see the material presented; and to note the rapport between teachers and students and the state specialist. They gave the survey staff member an opportunity to feel enthusiasm, to see strengths and weaknesses, and to arrive at specific conclusions leading to commendations and recommendations.

HIGH SCHOOL PROGRAMS

Programs at the high school level were given the greatest attention by the survey staff member in his visitations and in the conferences held in connection with Utah's DE and Service Occupations program. Two charts were prepared which summarize the information gained from the interviews with school personnel. Charts B and C contain a list of pertinent questions about the programs and show the opinions or ratings elicited by each question.

Analysis of Chart B

Question 1: Is there a clear statement of the objectives of the program and the duties of the teacher-coordinator?

Summary findings on the schools visited indicate that there is a very clear written statement of the program of objectives but that time in the teaching schedule for carrying out these objectives is extremely limited. For example, in one center the DE coordinator taught three periods of Typing, one period of Bookkeeping, one period of General Business, and one period of Marketing (DE). Another center included in the schedule of the DE coordinator four hours of Biology with only one period of Marketing. Still another center had the coordinator teaching three periods of English and two periods of French along with one period of Marketing. (In all three cases, downtown coordination was accomplished in addition to the regular schedule.) Instruction in Marketing amounted on the average to 1/5, 1/6, or as little as 1/7 of the teaching schedule. Marketing appeared to be taken on as an afterthought in the teachers' program of activity. It could hardly be called a program—only a class. It is quite clear, therefore, that the objectives and purposes of the training are well defined but that there is insufficient time for the teacher to do an adequate job in the teaching and coordination required in full-fledged DE programs.

CHART B

INTERVIEW QUESTIONS, ANSWERS, AND RATINGS

Key to Ratings:
(5) Excellent
(4) Very Good
(3) Good—Moderate
(2) Fair
(a) Moderate but out of date
(b) Limited and need more
(1) Poor

O—Operating Presently
M—Missing and should be considered
X—Involves district policy (see Analysis of Chart B for suggestions)

	High Schools						
Questions Asked:	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Is there a clear statement of the objectives of the program and the duties of the teacher-coordinator?	4	4	4	4	4	4	3
2. Does the coordinator have the professional, technical, and personal qualifications to conduct preparatory, cooperative, and adult (supplementary) programs effectively?	3	3	4	2	4	5	5
3. Does the curriculum provide for:							
• a preparatory program	M	O	M	M	M	M	M
• a cooperative program (1-hour)	O	O	O	O	O	O	O
• a cooperative program (2-hour)	M	M	M	M	M	M	M
• a supplementary program (adults)	M	M	M	M	M	M	M
4. Is the classroom conveniently located and equipped with facilities to provide a good setting for instruction?	2b	2b	3	2a	3	1	4
5. Are advisory committees used in the assessment of industries' needs?	X	X	X	X	X	X	X

Question 2: Does the coordinator have the professional, technical and personal qualifications to operate preparatory, cooperative, and adult distributive programs effectively?

The Utah school administrators are to be congratulated on their choice of instructors. Any one of the coordinators would, if interested, be qualified to teach preparatory, cooperative, mid-management, or supplementary adult programs. The coordinators interviewed (Chart B) were considered good, very good, or excellent. (Further information on the coordinators' personal attitudes and opinions about DE is shown in Chart C.)

Question 3: Does the curriculum provide for a preparatory program, a cooperative program (1 hour), a cooperative program (2 hours), a supplementary program (for adults)?

In the schools visited, only one school offered preparatory training in the junior year. The other six schools were marked on the chart with the key "M" (missing).

The local director should take the lead in encouraging the establishment of preparatory courses which lead to initial employment. These courses should be offered to juniors in the high schools now offering the cooperative program to senior students only. The purpose would be to strengthen the cooperative program. By furnishing the kind of knowledge and training needed for any entry occupation in distribution, these courses would insure that the students would be ready for employment and eligible to continue in the cooperative program during the senior year.

Students who complete the junior-year preparatory program could then continue in the one-hour senior-year program and at the same time have sufficient time for other subjects necessary for college entrance. For students who decide to enter the program in their senior year, a two-hour program should be offered (or another period be added to the one-hour classes now operating) to give the necessary depth which is often lacking in existing programs.

Upon completion of the cooperative class, there should be a close tie-in with Mid-Management or advanced-level courses offered in vocational-trade and community college 13th and 14th year programs. These programs could be basic Mid-Management in nature, for training junior executives, department heads, etc., or they might be specialized and technical in nature for specialized occupations.

For youth who have completed the high school or community college program but do not plan to continue college, an opportunity for evening supplementary classes should be provided to keep them abreast of the fast-moving and changing occupational scene.

Question 4: Is the classroom conveniently located and equipped with adequate facilities to provide a good setting for instruction?

The seven schools visited were given ratings ranging from poor to very good (one poor—meaning not adapted to DE; two fair—meaning equipment and facilities out of date or insufficient; three good; and one very good).

In budgeting for improvement of classrooms and facilities, it is possible that as much as $10,000 might be needed to completely refurnish the poorest facilities, while in other cases $500 could cover the needed equipment and/or improvements. It probably is safe to estimate that an average of $2,000 per school, or a total of approximately $65,000 for the 33 schools offering DE programs in the state, would be sufficient to bring all facilities up to standard.

It is gratifying to note that in spite of inadequate classroom facilities in many instances, an excellent job is being done in the teaching field; and it is most fortunate that some of the schools with the poorest equipment are blessed with excellent teachers.

Question 5: Are advisory committees used in the assessment of industries' needs?

In Chart B every school is designated with an "X" (involves district policy), since the district administration policy on advisory committees is determined largely by the views of the local director.

From the information gained through interviews and observation, there appears to be a clear line of responsibility and good working relationships between school district directors of vocational education and the principals of high schools offering DE. This is especially evident in the Salt Lake City district in the matter of advisory committees, in contrast to other districts in which there seems to be some question as to the role of the director and the real purpose and value of advisory committees. Both labor and management also found inadequate use of advisory committee potential.

There is also some difference of opinion as to the present supplementary (adult) education program—whether it should be the responsibility of the vocational-trade school, the four-year college, the two-year college, or the high school. It is reasonable to expect that because of differing situations, arrangements will have to be made according to district needs (accessibility, talent, etc.). The solution to this problem is dependent upon the capability of local district leadership in Utah.

Progress in the adult area of DE is wide open for expansion as soon as policy concerning responsibility can be determined. The local district director should work with the state supervisor and the state director in solving this problem. If local leadership is inadequate, progress may require stronger state direction and control.

Consideration should also be given to the formation of special advisory committees in cooperation with high school coordinators in their immediate areas of student employment. The better coordinators do work closely with businessmen in their communities, as evidenced by the reports of several merchants in at least two centers visited by the interviewer, although too many employers over the state report little or no contact. This close contact would also facilitate the establishment of programs for adults employed in distributive occupations. (It was also noted that the coordinators interviewed expressed a desire to offer, or assist in the development of, supplementary programs for adults and special services classes which come within the scope of Distributive Education.) If effective, advisory committees could then make up an overall, district-level committee to consider wider problems affecting the entire district and its various programs.

Analysis of Chart C

Question 1: What do you like most about the program?

The responses to this question may be summarized by saying that everyone professed to like the unique opportunity provided the coordinator to dovetail his program into the needs of businesses in the community; but more especially and perhaps significantly the coordinators reflected the school orientation in that the most gratifying part of the program was being able to bring practical training and values to their students. They viewed the program as an opportunity for each one personally to render this unique service to their students. There were varying degrees of enthusiasm. In some instances the program was thought of as a real challenge; but the longer the

CHART C

ATTITUDES AND RESPONSES OF COORDINATORS TO SPECIFIC QUESTIONS

Questions	*Coordinators' Replies*						
	1	*2*	*3*	*4*	*5*	*6*	*7*
1. What do you like most about the program?	Associations with business men	Practical values for students	Uniqueness and student opportunities	Downtown coordination	Challenge, liaison with community & practicality	Need for this type of training	Fulfilling student needs and opportunity for growth
2. If you could have an ideal setup, what would you ask for in terms of improvement?	More visual aids and equipment	More time in schedule for coordination	Model classroom and tape recorder	Opportunity to create a better image of DE	Addition of preparatory program	Time in schedule to promote all areas of DE	Opportunity to expand program in all areas
3. Do you believe a one-hour period is sufficient instruction time for DE?	Not ready to answer	No. Suggested 10th grade introductory course	Avoided a direct answer. Believed in expansion	No. One hour not enough	Not a direct or clear-cut reply	Definitely not enough	Definitely need more
4. Would you be interested in a schedule that would provide more time for instruction?	Did not feel qualified to answer	Has a preparatory course now	Interested in a slow-learner preparatory class	Would like to have a preparatory program added	Expressed a desire to add a preparatory class	Very interested in having a full-day DE schedule	All-day DE schedule to promote preparatory, cooperative and adult DE programs
5. What is the size of your class?	20	40	20	20	20	28	18
6. How many are in the graduating class?	664			325			
7. Additional comments?	New to program	Interested in 10th grade introductory course	Interested in slow-learner class			Would like to have a flexible program for students	

discussion continued, the higher the enthusiasm grew, as if it had been latent or dormant.

Question 2: If you could have an ideal setup, what would you suggest or ask for in terms of improvement?

When asked this question, some coordinators were taken by surprise. At first they spoke of immediate needs—equipment, visual aids, coordination time, etc.—but as opportunity was given for further exploration of the question, they thought of model classrooms and how to overcome the "dumping ground" image of the program in view of existing facilities. They enthusiastically visualized a full day's program involving all students, with different programs for students with differing abilities. They saw opportunities in preparatory training, cooperative training, mid-management training above the high school level, supplementary evening training for people employed during the day who wanted to increase their skills and knowledge.

Questions 3 and 4: Do you believe there is sufficient time in a one-hour period to cover the needed instructional portion of DE classes? Would you be interested in a schedule which would provide more time for instruction?

To these questions the responses were immediate, with comments such as: "One period is not enough." "Two periods needed." "Need one-hour preparatory in addition." Some would give no definite answer or evaded the question, either because of their own newness in the program or through an inclination to have directives on questions such as these handed down from local officials or the state office. When they understood, however, that their answers would not reflect on individuals, the administration, or anyone else, the questions were answered freely, and the concensus was that there was decidedly not sufficient time in one hour to do the work desired.

Questions 5 and 6: What is the size of your class? How many are there in the graduating class?

The figures indicate that less than 3 per cent of the seniors in Utah high schools were provided training in DE; and using the national average of 15 per cent (with up to 25 per cent when service occupations are included), it is quite evident that need for expansion is great in the Distributive Education field in the state of Utah.

Question 7: Additional comments?

Administrators, principals, coordinators, and directors were extremely complimentary as to the progress of the program. However, they all felt that more should be done for the non-college-bound student. It was also agreed that the addition of another period of DE would not hamper or prevent students who carefully planned their programs from also including college preparatory subjects. This view was supported also by the counselors contacted and it was quite evident that they were working closely with the DE coordinators.

POST-SECONDARY OFFERINGS IN DISTRIBUTIVE EDUCATION

The Salt Lake Vocational Trade Institue has the distinction of offering the first marketing program in Utah, specializing in the grocery field. It is a 9-months cooperative program providing three hours of instruction in theory each day, with on-the-job training in the afternoon. In addition to the day program, an 80-hour series of courses in Checker Training is offered for adults on an evening basis. Plans for this program were laid approximately two months before the opening of the regular fall term. Representatives of several firms, plus a union representative, served on the advisory committee. This committee effectively assisted in the recruitment of students, and there was also considerable publicity given this program through the high school counselors, the employment bureau, and the local newspaper.

The instructor, a former employee of Safeway, has a college degree and specialized experience in the grocery field. He is currently developing a course of study based on his own experience (and would welcome the opportunity to work with others engaged in similar training). It is evident that enthusiasm is high. He sees the program as rendering a great service to young people and predicts a future with unlimited possibilities for training in this area. His special problem was that out of an initial enrollment of twenty-two, only about half remained to complete the 9-months program. The others had gone on to full-time employment.

The administration shares the enthusiasm for his program and has proposed the idea that a greater number could be served if the time were shortened to six months. It is the opinion of the survey staff, as well as the instructor, that shortening the time is *not the answer.* It is not uncommon for vocational-technical school students in all parts of the country to leave their classes before attaining what is considered to be the depth of training essential for progress in their occupational specialty. Nevertheless, it must be recognized that the training has been successful in terms of securing full-time employment and that a service has been rendered.

Rather than shortening the course, several considerations should be explored, such as:

- Place greater emphasis in class during the year on the values and advantages connected with completing the full program.
- Replace immediately or at stated intervals any class vacancies with students from the waiting list. (This had not been done during the year.) This would involve special, individual attention but because much of the subject matter is taught through individual projects, it could be done and the class enrollment could be kept constant.
- In the future, organize the course into three major areas of emphasis lasting three months each. Each area of emphasis should be sufficient unto itself, but each should also lead to the next level for a well rounded program. In view of the fact that dropouts occurred after the first six months, special attention should be given to the third phase of the program. In this connection, serious consideration should be given to developing student leadership through organizing a club near the end of the second three-months period with the intent that the activities, both social and educational, be a major student responsibility during the final three months of the training program. Plans could be laid during class sessions and career-opportunity talks could be prepared for presentation to seniors in high schools, at local service clubs, and to a wide variety of public gatherings. Articles could be prepared for trade journals and for the local newspapers. Committees could be organized to promote a year-end employer-employee appreciation banquet at which certificates might well be given to all students completing

> the year's training in DE. The opportunity for student self-expression and leadership would be a significant incentive for staying in a course to completion. To make it flexible for all, one phase of the training might also be considered as an evening offering, if the needs of individuals could be met better in this way.

Excellent plans are in the making for a new trade institute but unfortunately, for the time being, no facilities for the present DE classes are included in the plans for the new building. The present building—an old laundry layout—is located close to the business district in Salt Lake City and with other classes leaving the building, there would be new space available for DE, including expansion of the present program. Therefore, it would seem desirable that the building be renovated to provide a center for the mid-management or marketing program to serve the Salt Lake District. It could also serve as a center for evening classes. This would be a very satisfactory solution for at least the next five-year period.

The present facilities, though usable, should be remodeled and the expenditure of approximately $10,000 should be considered. This sum should be sufficient to give a new look to the building. This would add greatly to the program and the desire on the part of students to enroll. Any remodeling plans should include provision for a room for the grocery unit and another room for the contemplated program to serve the general retailing field. These facilities could be used *extensively* for evening programs as well.

WEBER STATE COLLEGE AND OTHER EDUCATIONAL CENTERS

At a four-year institution, such as Weber State College, consideration should be given to serving the needs of all facets of education including vocational education. Serious discussions are now underway on doing just this in the first and second years of the college program.

There is an area of need in the distributive program which many states like to refer to as the mid-management area. The Salt Lake Technical Trade Institute has one type (the specialized type). Utah Trade and Technical Institute at Provo may choose to specialize in another area (real estate or insurance); others in motel, hotel or restaurant service areas; and at present Utah State University at Logan conducts management institutes.

At universities and colleges it is important that the program not be confused with regularly established business administration academic courses which are organized in a sequence leading to a baccalaureate degree. Mid-management units of instruction are geared to occupational competencies and skills needed at the middle-management, junior-executive, departmental-head level. The program should be so organized that students can complete the requirements of a mid-management program in a one-year concentrated course, or a two-year course for those who wish to acquire college credits (toward an Associate of Arts degree), or take additional courses in business administration.

The programs in Business Administration and Mid-Management should in this way complement each other in the total educational picture. To keep the program identity and program objectives of each intact, the term mid-management should be used at post-secondary levels. Community colleges throughout the country are giving special attention to the training needs of the middle-management area because they recognize the gap which now exists between the high school and the university educational offerings.

TEACHER EDUCATION

Utah is to be commended for having established a teacher-education program at the University of Utah, and for having selected a teacher-educator with good technical and educational background, including experience as a local coordinator. The relationship between the University and the state office is governed by a working agreement which specifies the duties, responsibilities, and special assignments of the teacher-educator. This year it includes items such as responsibility for the news publication, for preparing a coordinators' guide, and for follow-up and visitation in connection with teacher training. Included in his schedule is the promotion, teaching, and conducting of management institutes throughout the state.

Although this agreement is satisfactory for the time being, it should be open to review and renewed each year to adjust to program needs and plans for the future. The teacher-educator and the state specialist should complement each other's efforts. Each has a special place of importance in a successful state program. Each must keep in tune and clearly understand his part in making the program a success. To accomplish this, constant communication must be kept alive between the teacher-educator and the state specialist in planning programs and activities for the year.

Workshops should be arranged for the specific purpose of training present coordinators in the organization, promotion, and development of adult courses. To aid teachers of preparatory programs, a guide or manual should be developed.

STATEWIDE NEEDS

From the excellent records on file in the state office on programs in all centers in Utah, plus firsthand discussion of these programs with state officials, the survey staff is convinced that the centers visited represent a good cross-section of statewide conditions and needs. The specific recommendations made regarding these centers and their needs have been summarized to apply generally and statewide. The enrollment in the high schools, the size of the communities they serve, and the almost unlimited potential for placement in distributive and service occupations, clearly indicate the need for further statewide expansion and promotion of Distributive Education.

High schools with 100 or more seniors should consider the desirability of offering a two-hour unit of either cooperative or preparatory-and-cooperative programs. Efforts should be directed toward offering cooperative programs (as the ideal program) in communities large enough to support them. A two-hour preparatory course for seniors in a small community can easily be converted to a cooperative program if students can find employment. If this is not feasible, the high school program may remain preparatory and students can enroll later in a post-secondary cooperative program; or if employed full time, in a supplementary evening class to keep up in their chosen career fields.

In large communities with high schools offering only one-hour cooperative classes, a one-hour class should be offered in the junior year to strengthen the existing cooperative program; and for students entering a program for the first time in the senior year, another hour should be added to the senior cooperative program since one-hour classes are definitely too limited to do an adequate job.

School districts with a total high school enrollment of 500 or fewer (not large enough to offer DE alone) might propose to experiment with various pilot programs in an attempt to serve their students' occupational needs. Federal funds for such experimentation are available.

MAJOR RECOMMENDATIONS

1. **An assistant with special interest and ability in the area of service occupations should be added to the state vocational staff and should be under the immediate direction of the DE specialist.** Service programs at the state level must be followed up by direct visitation and "on the spot" supervision at the local scene if continued attention to service occupations programs is to be assured.

2. **The salary, travel expenses, and other monetary aspects of positions should be made attractive enough and sufficiently competitive with other states to hold successful supervisors in their present positions.** Unless this is done, the enrollment in these new programs could easily drop again as it did in the past. Once programs have been lost, their reinstatement often proves to be slow and difficult.

3. **The building used for DE classes at the Salt Lake Vocational Trade Institute should be remodeled.** Approximately $10,000 should be sufficient to give a new look to the building and to add greatly to the program and the desire on the part of students to enroll.

4. **An estimated $65,000 should be spent for improvement of rooms and facilities in the 33 schools offering DE programs in the state.**

5. **A continuing program of Distributive Education should be organized at the high school, post-secondary (mid-management), and evening (adult) levels.** A total career program in Distributive Education should be emphasized both in the field and within the school; for example: 11th grade—preparatory; 12th grade—cooperative; 13th and 14th grades—mid-management; and supplementary classes for full-time management. Training in the mid-management areas needs special attention because of the gap which now exists between the high school and the university educational offerings.

6. **Teacher-coordinators should be given full-day schedules of**

responsibility in the teaching and coordination of Distributive Education. Present schedules in DE offerings are extremely limited with only one-fifth, one-sixth, or even one-seventh of a teacher's time allotted to marketing instruction.

7. **Depth and flexibility in course offerings should be provided.** This could be done by continuing the one-hour cooperative course for students who have completed the preparatory course; by adding another hour to the present cooperative class for seniors who have not taken the preparatory course in their junior year; and by organizing, when possible, a third cooperative class (2-hour) for students who have finished the preparatory program and have time for additional leadership training, or for those who need or desire special attention.

8. **The local district vocational director and the high school principals should consider setting up specific and individual advisory committees for DE in each school.** These committees would serve the immediate community employment area served by each high school.

9. **The chairmen of the high school advisory committees should constitute an overall district advisory committee.**

10. **The district vocational director, the state supervisor, and the state director should determine where the primary responsibility should be placed for the promotion of the evening classes.** The DE coordinators could well assist in the promotion of the program in the communities they serve.

11. **A guide or manual to aid teachers of preparatory programs should be developed.**

CHAPTER 4

INDUSTRIAL ARTS

With each high school graduation class, young people enter a world that is increasingly more technological and industrial. The impact of this industrial technology is changing the way people live, work, and spend their leisure. Helping young people to understand this changing society is the function of industrial arts in the secondary schools.

The trend toward technology in industry has developed from the artisan-craftsman stage of industry, with its emphasis upon manual skill, to the factory system, with its giant machines operated and controlled by man, and finally to industries with processes and machines so automated and programmed as to change drastically the nature of industrial work for man. The earlier emphasis on manual labor has given ground to more sophisticated skills and information needed in today's technical industries.

Unlike industry, the industrial arts programs in the schools have not been as ready to change their methodology and content. Industrial arts has retained too long the trade-craft approach to a study of industry when the need is to study industry as it is today—a modern technological institution.

Little opportunity outside the school is afforded young people today to learn about industry and its processes or to explore its world of work. Industrial arts is designed to provide this opportunity through a study of industry, its people, tools, materials, processes, and products. A good program of industrial arts

> . . . brings about wholesome changes in the learner by affecting his habits, attitudes, and understandings. These changes take the form of a developed interest in the man-made physical world. They are brought about by: (1) a knowledge of how materials are produced and fabricated; (2) an understanding of the place of tools, machines, and men in industrial processes; (3) the evaluation of the learner's attitude toward craftsmanship and constructive work; (4) the utilization of such work for health, recreation, and economic values; and (5) the development of a favorable attitude toward creative thinking.[1]

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[1] American Council of Industrial Arts Supervisors, *Industrial Arts Education*, National Education Association, Washington, D. C., 1963, p. 4.

Contrasted with its counterpart, vocational-industrial education (including trade and industrial, and technical-industrial education), industrial art seeks understandings and appreciations of industry which help young people to live more effective lives in an industrial-technological society, regardless of the occupations they follow in life. Vocational-industrial education helps young people who have chosen or entered an industrial occupation to prepare for, or to upgrade themselves in, their chosen work. It has definite wage-earning objectives of skill development, related technical information, and development of employee traits which help young people to enter an industrial job and make satisfactory progress.

Objectives commonly accepted for industrial arts in the secondary schools are:

1. To develop in each student an insight and understanding of industry and its place in our society
2. To discover and develop student talents in industrial-technical fields
3. To develop problem-solving abilities related to the materials, processes, and products of industry
4. To develop in each student skill in the safe use of tools and machines.[2]

All boys and girls can profit from experiences in industrial arts. Only those students who have for a career objective an industrial type job should enroll in vocational-industrial classes. Together, the two programs complement each other and are necessary parts of a total educational program—one as a study of industry for general education values, and the other for job preparation. When industrial arts courses are used to serve vocational needs without modifying considerably the course objectives and content, the program is neither good industrial arts nor good vocational-industrial education, and vice versa.

STATE PLAN FOR INDUSTRIAL ARTS

There is general agreement in the state of Utah among leaders in industrial arts as to the need for reorientation of the program and unifying, to a degree, the policies and practices governing the program of instruction. Lacking, however, is a plan or guide for use by teachers, administrators, teacher educators, and state department personnel in organizing, administering, and evaluating programs. Without such a plan, much of the efforts to develop and improve programs are uncoordinated, diffused, and ineffective. The plan should include such materials as philosophy, objectives, curriculum content levels and description, program evaluation criteria, procedures for establishing programs, and assistance available from state office personnel.

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[2] *Ibid.*, pp. 4-5.

PROGRAM OF INSTRUCTION—SENIOR HIGH SCHOOLS

The industrial arts program at the senior high school level in the schools visited reveals it is organized along the traditional approach to instructional content—i.e., trade-craft oriented and student project dominated.

Automotives

The industrial arts automotives classes are well organized and planned, although they lean more heavily, perhaps, than any other industrial arts area toward trade training. Consideration should be given to broadening this curriculum area to the field of power mechanics.

Drafting

The courses in drafting at the senior high school level are well organized and conducted. There is good coverage of instructional content, with the exception of electrical and electronic drafting. This area is missing from the state study guide and should be added when a revision is made. Some inservice education of teachers in electrical and electronic drafting will likely be necessary. The drafting rooms visited, except where noted elsewhere in this report, are well planned and equipped. A few instructors have overhead projectors and transparencies assigned to their rooms on a full-time basis. These are invaluable teaching tools in drafting programs and all classrooms should be so equipped.

Electricity-electronics

The electronics industry is a growing industry in Utah as well as in the United States, and considerable interest is being shown in the electricity-electronics program in the high schools. A review of the curriculum for this program reveals that it is slanted too much toward radio construction and servicing. (Box Elder High School is an example, with courses in

Radio I and Radio II.) This fact was further evidenced by the student projects and activities in the classes visited and the "elements of instruction" and "student activities" suggested in the state instruction guide[3] for course levels, I, II, III. Industrial arts electricity-electronics should be a study of the broad field of electricity and electronics, including more than communications electronics. The trend is toward the experimental-demonstration approach to the teaching of electricity and electronics, with approximately 25 per cent of the time for instruction, 50 per cent for student experiment-demonstration, and 25 per cent for individual student project design and construction.

Most of the industrial arts electricity-electronics laboratories are in need of considerable equipment in order to conduct a broad industrial electronics program. An estimate for the average laboratory would be from $5,000 to $7,000 of additional equipment needed in order to conduct programs with the experimental-demonstration approach.

Graphic Arts

Graphic arts is a major industry in Utah as well as in the United States, and yet no secondary school in Utah offers a formalized program of instruction in industrial arts in this curriculum area. One trade and industrial class is offered in graphic arts at Provo High School. An opportunity should be provided in this school for students to explore the field through an industrial arts class before enrolling in the vocational class. One limiting factor to the development of graphic arts in Utah is the number of teachers with a background in graphic arts. Brigham Young University offers a broad program for teachers in the graphic arts, and programs should be included at the other industrial arts teacher education institutions so that more teachers entering the field will be available to encourage the starting of programs.

Industrial Crafts

Industrial crafts includes instruction in leather, plastics, lapidary and silversmithing as outlined in the state instruction guide published in 1963. Although the student projects suggested in the guide are largely of the handicraft construction nature, there are numerous suggestions for the study of processes of modern industrial plastics and leatherworking. Industrial ceramics, an important and growing industry, is missing from the industrial crafts guide. This curriculum area should be strengthened by providing the necessary equipment to introduce more industrial processes in plastics and ceramics.

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[3] Utah State Department of Public Instruction, *Industrial Arts in Utah, Instruction Guide for Electricity-Electronics*, (Salt Lake City: The Department, 1963), 68 pp.

Metals

There is a trend in the newer schools to set up general metals laboratories as opposed to unit laboratories. This trend is to be encouraged for industrial arts offerings because it provides maximum opportunity for students to study and explore the broad field of metalworking industries and occupations. Some new programs, and many of those established earlier, are organized on a unit basis such as machine shop or welding, which tends toward specialization and limits occupational exploration. In schools where there is need to provide occupational training and school enrollments justify it, the general metals laboratories will serve to provide this training for smaller numbers in vocational classes. In larger schools where enrollment warrants and the need exists for more specialized vocational training, unit laboratories may be provided. If such laboratories are used for industrial arts courses also, the courses should be organized so as to permit students to gain experiences in more than one laboratory area during the year.

Woodwork

Woodworking is a well organized but dominant program in industrial arts in Utah. The dominance of woodworking is a factor contributing to the obsolescence of the instructional program, with 37 per cent of the time allotted for industrial arts devoted to this area and encompassing 19 per cent of the students enrolled in industrial arts at the secondary school level.[4] A further emphasis in wood is indicated by the fact that approximately 60 per cent of the instructional content of high school general laboratories is in this curriculum area.[5] Contrasted with the imbalance in favor of wood is a decided lack of emphasis in metals where only 10 per cent of the industrial arts time is allotted and 10 per cent of the students are enrolled.[6] In electricity-electronics the percentages for allotted time (12 per cent) and enrollment (8 per cent) are also low.

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[4] Joe O. Luke, *An Analysis of the Status of Industrial Arts Education in the Public Secondary Schools in Utah,* (Unpublished master's thesis, Brigham Young University, Provo, Utah, 1965), pp. 76, 80.

[5] *Ibid.,* p. 75.

PROGRAM OF INSTRUCTION—JUNIOR HIGH SCHOOLS

There is a strong tendency to duplicate the senior high school offerings in industrial arts at the junior high school level. Woodwork is the usual offering at the seventh grade level for one semester and metalwork (limited in the main to sheetmetal and bench metal) for one semester in the eighth grade. One full year of industrial arts is offered ninth graders, with instruction in a comprehensive general shop covering crafts and woods primarily. Wood dominates the instructional time at the junior high level,[7] as it does in the senior high industrial arts, consuming over one-third of the time.

Careful consideration should be given to reorienting the junior high school program to a crafts approach on the seventh and eighth grade levels, utilizing the materials and processes of industry but without the formal industry approach recommended for the senior high school. The desire to create and the avocational interest factor make the crafts approach a particularly strong motivating force for junior high school youth. The ninth grade industrial arts program should begin the more formal study of industry, with emphasis on exploration of the several fields of industry.

PROGRAM OF INSTRUCTION—ELEMENTARY SCHOOLS

Only one elementary school, Wasatch, was offering industrial arts at the time of the survey. Sixth grade boys and girls in this school were provided experience in working with individual projects in wood, metal, textiles, and leather. Although the pupils were highly motivated in their project activities, separating the industrial arts program from the students' regular classroom program limits some of the correlating values of industrial arts in the elementary school.

INSTRUCTIONAL MATERIALS

State curriculum guides for industrial arts have been available in Utah for a number of years. Present guides were published in 1963 and are available from the State Department of Public Instruction for drafting, electricity-electronics, industrial crafts, metals, and woods. These guides were scheduled for revision at the time of the survey. Included in the present guides are the instructional plan listing the units of instruction to be covered, sample teaching guide, student study guide, procedure guide, equipment lists, and reference and resource materials. Insofar as these materials go, they are quite helpful, particularly to the beginning instructors. However, more materials are needed in order to achieve the purpose of industrial arts as a study of industry and to achieve the objectives of occupational orientation, development of creative talents, and problem solving abilities. The state guides are supplemented by local guides in several of the larger local school systems.

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[6] *Ibid.*, p. 76.
[7] *Ibid.*, p. 75.

The preparation of instructional materials cannot be satisfactorily achieved through the limited time efforts of the state industrial arts specialists and a few volunteer teachers serving on committees. The assistance of a full-time curriculum specialist in industrial arts and vocational education is needed. Under his leadership and guidance, curricular materials could be produced in sufficient quantities to meet the needs of local teachers.

SAFETY INSTRUCTION

The state law regarding the wearing of eye protective equipment appears to be a good law as far as industrial arts is concerned. This law brought to the attention of school officials the importance of eye protection, and, as a result, equipment for this purpose is being made available to the schools. However, having the protective equipment available is one thing and requiring students to wear it, as well as develop proper safety habits and attitudes, is another. In nearly every class visited where eye protective equipment was needed, some students (ranging from one or two to over half the class) were disregarding the use of the devices. The safety instruction program in most schools consists of instruction on the importance of eye protection, machine-use safety rules, safety zones for machines, and the actual use of eye protection equipment. But there is need for an organized safety instruction program for use by instructors in developing good safety attitudes and habits on the part of students. The first concern of any safety or eye protection program should be to protect the health and physical being of students and teachers. Second to this, but also important, is the development of positive attitudes and habits of working safely with industrial machines, tools, and processes.

LEADERSHIP AT THE STATE LEVEL

The state specialist for industrial arts should supply leadership coordination and technical assistance to programs and personnel within the state. It was evident in the responses of those interviewed that the State Department of Public Instruction has been, over the years, a strong force for leadership in industrial arts. The manner in which the state specialist works with the Utah Industrial Arts Association is commendable.

Adequate instructional materials are second only to well prepared teachers. Some excellent work has been done with instructional course guides, but the state needs to expand its service in this area. In a state as large, geographically, as Utah it is difficult for one man adequately to meet the needs of the entire state for leadership and consultative services. It is possible, however, that his efforts could be greatly enhanced by making more use of teacher education personnel in identifying and fulfilling certain needs of local school programs.

The state specialist in industrial arts has been in his present position two years and, at the time of the survey, had attended only one national professional conference, and no regional professional meetings out of state; nor has he had the opportunity of visiting secondary school programs in other states. It would be a wise investment in program improvement to make it possible for a person holding the leadership position of state industrial arts specialist to attend at least one national or regional out-of-state conference each year.

TEACHER EDUCATION

Three teacher education institutions in the state—Brigham Young University, College of Southern Utah, and Utah State University—have industrial arts programs and are approved for the preparation of teachers of industrial arts. These institutions are adequate in number to supply the needs of the state and reportedly could accommodate a 50 per cent increase in enrollment.

It is a well established fact that teachers teach as they have been taught, and this holds true for Utah. The industrial arts teacher education program has followed the traditional curriculum approach, with courses organized around the trade-craft, individual student project approach. However, there are encouraging signs of change. Notable among these are the addition of the graduate course *#200—Industrial Education Experimental Laboratory* at USU and the graduate course *#525—*

Course Construction in Industrial and Technical Education at BYU. These courses are designed to help teachers experiment with tools, materials, and processes of industry, and to develop new and improved teaching techniques. The requirement of a minor outside the field for industrial arts majors at USU limits the breadth and depth of preparation teachers receive in industrial arts. Furthermore, the technical competencies required of industrial arts teachers have greatly increased in recent years.

Further attempts to update the teacher education program have been the workshops conducted in the last five years. These workshops included one each on research, electronics, industrial plastics, and adhesives. If any significant reorientation of the industrial arts program toward the basic goal of a study of industry is to be accomplished, much more will need to be done in the way of curriculum change and services in the preservice and inservice teacher education programs in the state.

If industrial arts is to be inaugurated in the elementary schools of the state, some planning for the preparation of teachers should be made by teacher education institutions. This could be done on a limited basis by expanding especially designed courses in industrial arts for elementary teachers and gradually developing a program for the training of industrial arts specialists for the elementary schools.

While the number of graduates is adequate to meet the demands for teachers within the state, a well organized program of teacher candidate recruitment should be formulated to acquaint talented high school students with the opportunities that exist in industrial arts teaching. There is little danger of a surplus of teachers, since many seek and accept teaching positions in other states.

TEACHER CERTIFICATION

Certification requirements for industrial arts were being studied and revised at the time of the survey and are scheduled to go into effect September 1, 1967. These could have far-reaching effects on upgrading teachers—provided local boards of education give an added monetary incentive for the fifth year of professional preparation required for the Professional Certificate. According to a study conducted in 1964-65 by Joe O. Luke,[8] only 14 per cent of the industrial arts teachers in Utah held the master's degree.

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[8] *Ibid.*, p. 36.

RELATION OF INDUSTRIAL ARTS TO TRADE AND INDUSTRIAL EDUCATION

There is a need and a trend throughout the U. S. to provide high school youth with the opportunity to participate in vocational education programs leading to industrial employment. Utah is no exception. Stimulated by the Vocational Education Act of 1963, the State Department of Public Instruction, through its Division of Vocational Education, has inaugurated 145 day trade programs in high schools in the last two years. If taken in terms of numbers of programs, this is a significant accomplishment. The effectiveness of such a development, however, is dependent upon other factors as well.

Most vocational-industrial educators would agree that sound programs involve at least five factors: (1) labor market study indicating need for workers when trained; (2) careful selection of students upon basis of career objective; (3) recommendations of representative craft advisory committee as to need for and nature of training to be provided; (4) adequate training facilities; and (5) a qualified instructor.

One of the greatest concerns to this staff member is that, with a few exceptions, the above five factors were either not considered or were disregarded in the establishment of day trade programs in the high schools visited. Rather, programs appeared to have been established where facilities were available and where advanced industrial arts classes were being conducted.

In visiting with students in the vocational classes, there appeared to be no strong commitment on their part to enter the occupation for which training was being provided. There was a lack of clarity on the part of instructors in the school as to the difference in philosophy, objectives, and content of their industrial arts courses and the vocational course.

It is the belief of this staff member, based upon his experience with industrial arts and vocational-industrial programs, that the teaching of trade subjects involves more technical-related content than it did twenty-five years ago and, further, that much of this technical-related content as well as skill development can be acquired in a technical school, such as in industrial arts teacher education technical courses, engineering college technical courses, and industry sponsored technical school courses. However, this technical training needs to be supplemented by a period of bona fide occupational experience in industry. The extent of this experience would depend upon the trade or industrial occupation to be taught and the amount and nature of the technical training received in a school or college. A few of the instructors teaching vocational programs have had several years of experience in their trade field, but a sizable portion needs more actual industrial experience related directly to their teaching assignment.

In one high school visited (Olympus-Granite District), the vocational classes were scheduled at the end of the school day as an extended day program. After attending school all day, instructors and students were not in the best physical or mental state to pursue effectively the vocational work.

The real proof of the value of any vocational program is in its placement record for students. Since the program was in its second year at the time of the survey, this criterion cannot be used to evaluate the success of the programs in the various high schools. It is well to keep in mind, however, that the Vocational Education Act of 1963 provides for an evaluation of the program in 1968. The two basic questions which will be asked are, "How many did you train?" and "How many did you place?" Those administrators and supervisors of trade and industrial education at the local and state levels might well begin to consider these two questions in regard to present programs.

A policy of permitting students to take four years of any one industrial arts subject while in high school was in practice in the high schools visited. This practice is highly questionable from the standpoint of general education and leads in part to the confusion between industrial arts and vocational-industrial education in the minds of school personnel and the lay public. It would be better to limit industrial arts offerings to two units (two years) per area and establish vocational courses in those areas where justified by the five factors enumerated earlier. Those students desiring to enter the occupational field for which vocational training is provided should be enrolled, and students not so interested should be encouraged to take work in other areas of industrial arts.

INDUSTRIAL ARTS AND VOCATIONAL AGRICULTURE

A problem in some of the smaller schools is the joint use of the same facility for shop instruction in industrial arts and vocational agriculture. In a few cases the use of the same instructor for both programs occurs. Neither of these situations works very well, but it is recognized they are necessary because of the small enrollment in each program. It would seem that the more serious of the two is the use of the same instructor for both programs when he is trained for only one. Many administrators assume "shop work" is "shop work" and the two programs differ only in the kind of projects on which the students work. This may too often be the case, but industrial arts should be more than shop work; it should be a study of industry which includes some shop work but for a purpose different from that of farm shop. Unless the teacher is prepared in the philosophy and methodology of industrial arts as well as in the "shop skills," a sub-marginal program of industrial arts will result, if indeed it is industrial arts at all.

LOCAL DIRECTORS AND SUPERVISORS OF INDUSTRIAL ARTS PROGRAMS

Some of the larger city school programs are under the supervision of capable individuals in industrial arts. However, a number of industrial arts programs in the state are being supervised by personnel whose major specialty in education lies in other subject areas. The problem is not so much one of the local directors' and supervisors' being unsympathetic with the program as it is in their being unfamiliar with the philosophy and objectives of industrial arts and therefore lacking the capability of offering constructive leadership for program improvement. State supervision cannot offset entirely this deficit at the local school level. Ways must be found to assist the local director or supervisor in developing an understanding of the industrial arts program in high schools.

INDUSTRIAL ARTS PROJECT EXHIBITS

Industrial arts project exhibits have developed over the years as an annual affair with many local school and state associations. While these exhibits have their values in motivating students and attracting attention to the program, they also have some negative aspects for the program. Such exhibits present the image that industrial arts is largely project making and manual skill development involving little serious (mental) study or concentration. This concept of industrial arts, fostered by the annual exhibits, has undoubtedly been responsible for school administrators and counselors "sending" students to the shop when they were failing or causing trouble in "academic" classes.

The project and project exhibits should be used for their positive values of student motivation. Exhibits should also feature other aspects of industrial arts which typify industrial arts as a study of industry.

MAJOR RECOMMENDATIONS

1. **The industrial arts program at the senior high level should be redirected away from the trade-craft approach to a true study of industry.** This will require a reorientation of instructional content and the student project method.

2. **Courses in electricity-electronics should include a broad study of industrial electricity and electronics.** Present programs are limited in scope with a heavy emphasis on radio construction and servicing.

3. **Equipment for industrial arts electricity-electronics laboratories should be increased.** Present equipment in most schools is so limited that students are deprived of the value of performing many of the experiment-demonstrations. Much greater coverage of instructional content could be achieved with adequate test equipment and student circuit boards permitting use of the experimental-demonstration approach in teaching.

4. **Instruction in electrical and electronic drafting should be included in the drafting courses.** An instructional outline, source materials, and references should be keyed into the next revision of the state instruction guide for drafting. Workshops will need to be provided for instructors who lack the necessary background in this type of drafting.

5. **Programs of graphic arts are needed in the secondary schools of Utah.** Graphic arts is a major industry in the economy and represents an important area of study for general education purposes as well as occupational exploration for vocational guidance purposes.

6. **Whenever possible, industrial arts courses and laboratories should be organized as limited general areas as opposed to unit or specialized areas.** The broad concept of the limited general courses or laboratories lends itself to a study of industry more in keeping with the purpose and objectives of industrial arts.

7. **Industrial arts at the junior high school level should be organized around the crafts approach as differentiated from the industry approach at the senior high school.** There could be overlapping in some materials and processes but the emphasis should be upon the junior high school student's desire to create and upon his strong avocational interest.

8. **Industrial arts programs should be inaugurated for elementary school pupils as a part of their regular classroom studies.** The industrial arts activities should be integrated with the curriculum of the regular elementary classroom and taught by the elementary school instructor with the assistance of an industrial arts instructor.

9. **State curriculum guides should be revised to include materials and suggested activities more nearly in line with a broad study of industry and exploration of occupational opportunities.**

10. **A curriculum specialist should be employed at the State Department of Public Instruction level to work with the specialists in industrial arts and vocational education.** Present work loads and responsibilities prevent the state staff from providing the time necessary to follow through on instructional materials development. Such a person would work cooperatively with the state staff, local school representatives, and teacher educators in the development of all types of instructional materials and aids.

11. **A safety program instruction guide needs to be developed for use by instructors in presenting a safety instruction program designed to instill proper safety attitudes and habits in industrial arts students.**

12. **The state specialist for industrial arts should concentrate his efforts and time on the leadership and coordinating functions of state supervision and rely more heavily on teacher education institutions for technical assistance to local school personnel and in program improvement.** The efforts of one man are spread too thin to do otherwise and be effective.

13. **Provision should be made for the state industrial arts specialist to attend at least one out-of-state national or regional professional conference per year.** Providing the leadership person, this professional growth opportunity would represent a worthwhile investment in the program of the entire state.

14. **Industrial arts teacher education institutions should continue to evaluate their programs.** They should experiment with new approaches in curriculum and introduce changes which will result in the preparation of teachers capable of organizing and conducting secondary school programs more nearly in line with the purpose and objectives of industrial arts.

15. **The equivalent of a full-time staff member in industrial arts should be added at USU to organize and conduct an inservice**

teacher education program aimed at retraining teachers and reorienting local school programs in industrial arts. This task could be carried out more effectively if, perhaps, the responsibilities were divided among several staff members with the necessary enthusiasm and talents for bringing about program changes.

16. **The requirement of a minor outside the field of industrial arts should be dropped at USU for teacher candidates in industrial arts.** The technical nature of industrial arts teaching has increased the amount of training required in the major field.

17. **Local boards of education should provide a monetary incentive to encourage teachers to obtain the fifth year professional certificate.** Much of the hope for improving industrial arts programs in the Utah schools lies in the retraining of teachers already employed. Only 14 per cent of the industrial arts teachers are presently qualified for the master's degree certificate.

18. **No additional day trade preparatory programs should be established until adequate consideration has been given to the factors regarded as essential to quality programs.** The prime consideration should be serving the needs of youth and the community.

19. **Immediate steps should be taken to evaluate the presently established day trade programs in the high schools on the basis of the factors of quality programs.** Those programs that cannot be justified should be terminated at the earliest feasible date.

20. **The number of units in one subject area of industrial arts should be limited to two.** Additional units tend to become vocational in nature and such courses should be organized as vocational courses with students selected accordingly.

21. **The state specialists in industrial arts and vocational agriculture should plan with teacher education institutions programs of inservice education or summer workshops.** These workshops would assist instructors who are teaching in both industrial arts and vocational agriculture programs and are not properly trained for their teaching assignment. An instructor should meet at least the minimum requirement for teaching in the minor field.

22. **The state specialist for industrial arts should encourage teacher education institutions to provide programs to assist local supervisors of industrial arts programs.** Such programs would help those who are not trained in industrial arts to develop an

understanding and appreciation of the philosophy and objectives of industrial arts.

23. **Industrial arts exhibits on a state and local basis should be organized to portray industrial arts as a "study of industry" as well as a student project exhibit.** To limit the exhibits to projects alone presents a narrow image of industrial arts to school personnel and lay citizens.

24. **A state plan for industrial arts should be developed to serve as a guide for program development and improvement.** The state department should appoint a committee composed of representatives of industrial arts personnel from all levels and school administrators to develop such a plan.

CHAPTER 5

TRADE AND INDUSTRIAL EDUCATION IN UTAH HIGH SCHOOLS

The emphasis today is on quality in vocational education as well as on vocational education opportunities for people of all ages, abilities, and geographical place of residence. Some of the principles and criteria broadly accepted for measuring excellence and adequacy of vocational education programs are:

1. Students should be enrolled who are interested in the occupation and have the ability to learn it.
2. Equipment should be up to date and similar to that used in the occupation.
3. Space should be adequate to house the necessary equipment and sufficiently attractive to place vocational education on a par with other educational programs.
4. Safety and health protection should be provided to protect the students and develop safe working attitudes and habits.
5. Instructors should be employed who have thorough knowledge of the occupation, the ability to motivate students, and to communicate their knowledge and skill to students. There is no universal agreement on the amount of practical experience needed, but there is unanimous recognition that practical trade or occupational experience is a must.
6. Every individual has the right to an education that will meet his interests and aptitudes.
7. Adequate time is needed for development of basic skills and knowledge needed in the occupation. This applies to the amount of time spent each day in the course as well as total length of the course. Normal school periods are not adequate for occupational courses because of the time spent in getting started and in closing laboratory or shop activities.

8. A close, continuous relationship with industry must be maintained. The most commonly accepted procedure for accomplishing this relationship is through industry advisory committees.

9. The effectiveness of vocational education is measured by the graduates—Are they employed in the occupation? How well do they do? To what extent did the training help them meet their initial and later employment needs?

OVERALL VIEW

This report deals specifically with trade and industrial education in Utah high schools, but the relationship to industrial arts and the post-high school programs is so close that these must also be involved. All high schools are required to offer industrial arts courses which give all students an opportunity for basic industrial education. This is an outstanding situation and the state is to be commended for such a wise policy.

Most of the high school trade courses are two periods in length. In many cases one hour of this two-hour period is offered before or after regular school hours, placing a penalty on vocational education students and making the course prohibitive for bus students. Most of the high school trade and industrial courses are taught in the industrial arts laboratories by industrial arts teachers. Cooperative training programs for trade and industrial occupations are very limited.

Since 1962 there has been an upsurge of high school trade and industrial education programs. There was an increase of 300 per cent in the 1965-66 enrollment over the previous year. However, trade and industrial education in high schools of Utah is still limited to 23 districts. The following tabulation indicates the curriculum limitations:

Number of High Schools	*Number of Districts*	*Number of Courses Offered*
16	11	1
12	3	2
8	3	3
6	4	4
2	2	5

Courses	*Number of Districts*	*Number of High Schools*
Auto Mechanics	17	27
Carpentry	5	15
Electronics and Electricity	5	19
Drafting	9	21
Machine Shop or Metals	11	13
Welding	3	3
Industrial Chemistry	1	1
Meat Cutting	1	1
Commercial Art	3	3
Printing	1	1
Auto Body	1	1

AREA PROGRAMS

An objective should be established to provide choices of trade and industrial education courses to all people and to provide the trained people needed in all areas of the state. This objective is impossible to accomplish in individual high schools and impossible to accomplish entirely at the high school level because many of the high schools are too small to have enough students interested in specific occupations. To provide 100 students interested in the 5 occupational areas, a high school would need an enrollment of approximately 600 students in the upper two grades or in Grade 12, if enrollment is limited to this group. The 5 occupational areas—Industrial Education, Industrial Arts, Trade and Industrial Education, Cooperative Training, and Post-High School Education—are used as a minimum program needed to provide any variety of choice, and even this is a very limited one. The minimum enrollment figure of 600 was determined by:

a. Taking approximately 50 per cent of the graduates that do not enter college

b. Taking one-third of the remaining half. (One-third of the Utah work force is engaged in skilled, semiskilled, technical, and service occupations in the trade and industrial complex.)

Forty-six of the high schools have fewer than 600 students in the upper three grades.

The Student Vocational Interest Survey made by the Division of Guidance and Testing, Ohio State Department of Education, indicates the need for a larger number than this for a minimum of five courses. The survey made in four high schools shows the following results:

High School	*Total Enrollment*	*Number of T&I Occupations in Which Adequate Student Interest for A Class Was Found*
Highland	2,180	9
Box Elder	1,570	5
Cedar City	571	2
Wayne	263	0

The study of *School Size and Program Quality in Southern High Schools* by Joe L. Jackson, George Peabody College for Teachers, found that schools under 500 seldom offered vocational courses and that the offerings did not increase significantly until enrollments of 1,000 or more were reached.[1]

A study of "Factors Governing the Establishment and Operation of Area Vocational-Technical Schools . . . ," by Richard Lyons Burns in 1964, reports that a population of 6,500 high school students is desirable for an area school, and a population of 2,000 students should be a minimum.[2]

The trade and industrial education programs in Utah have been established in connection with the industrial arts programs and, in most cases, use the same facilities and instructors. If this artificial means of determining the curriculum—instead of student interest and employment opportunities—is expanded the state will have a large number of people trained in a few areas such as auto mechanics, machine shop, drafting, woodworking, and electronics, leaving many other occupational areas neglected and the choices of students limited. This is particularly obvious in courses for girls in trade and industrial occupations.

The course offerings in a high school too often are limited by the attitude, philosophy, and interest of the school administration. When this is true, it means that many students do not have the opportunity to take courses in trade and industrial education while in high school. In like manner, when high schools must use industrial arts facilities and instructors for the trade and industrial programs, course offerings will be determined by the qualifications of the instructor.

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[1] Joe L. Jackson. *School Size and Program Quality in Southern High Schools* (Nashville: Center for Southern Education Studies, George Peabody College for Teachers, 1966).

[2] Richard Lyons Burns. "Factors Governing the Establishment and Operation of Area Vocational-Technical Schools in the United States with Application to Missouri," unpublished Doctor's dissertation University of Missouri, 1964.

The state has been wise in establishing area trade technical institutes with rather comprehensive curricula that are open to people from all over the state. These institutes can meet the needs of:

a. Students who do not have the opportunity to take trade and industrial education courses in high school

b. High school graduates who need additional training

c. High school graduates who are interested in other occupations not included in the high school program.

The curricula of the area trade technical institutes are much the same as those of the larger high schools in the Salt Lake area which have sufficient enrollment to provide minimum course offerings. These institutes could offer a much broader choice of courses to meet the varied interests of students and employment needs by establishing area programs to serve all the high schools in a district or, in less densely populated sections, by establishing area programs for high schools in two or more local school districts. The Richfield Technical Education Center is a good example of this type of programming.

Transportation problems do arise in this type of operation, but there are many cases over the country where high school students are attending an area program over a radius of 50 miles. Experience has also shown that students will enroll in an area program for a half day or transfer for the full school day if a high quality program in several occupations is offered, regardless of local school loyalties. The study of area vocational education programs by Burns reports that a 48-mile radius in rural areas and a 27-mile radius in metropolitan areas are feasible.[3]

To encourage this plan, the state should provide financial assistance for construction and equipment. Federal funds from the Vocational Education Act of 1963 can be used for this purpose. A theoretical approach based upon map study illustrates the concept of area programs:

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[3] *Ibid.*

HYPOTHETICAL AREA PROGRAMS

Schools	*Enrollment*
Washington District	
Hurricane High School	425
Dixie High School	484
Enterprise High School	158
Total	1,067
Iron District	
Parowan High School	276
Cedar High School	571
Total	847
Beaver District	
Beaver High School	345
Milford High School	211
Total	556
Sevier District	
Richfield High School	400
South Sevier	180
North Sevier	340
Piute District	
Piute High School	252
Wayne District	
Wayne High School	263
Total	1,435
Alpine District	
American Fork High School	817
Lehi High School	529
Orem High School	1,450
Pleasant Grove High School	759
Provo City District	1,575
Total	5,110
Jordan District	
Bingham High School, Bingham Canyon	693
Hillcrest High School, Midvale	1,375
Jordan High School Sandy	1,000
Murray City District	
Murray High School	1,078
Total	4,146

Schools	*Enrollment*
Cache District	
Skyview High School, Smithfield	1,230
Logan City District	
Logan High School	813
Rich District	
North Rich High School, Laketown	163
Total	2,206
Tintic District	
Tintic High School, Eureka	97
Nebo District	
Payson High School	526
Spanish Fork High School	731
Springville High School	720
Total	2,074
Morgan District	
Morgan High School	474
Ogden City District	
Ben Lomond High School	1,600
Ogden High School	2,016
Total	4,080
Grand District	
Grand County High School	340
San Juan District	
Monticello High School	319
San Juan High School	400
Total	1,059
Unitah District	
Unitah High School, Vernal	611
Union High School, Roosevelt	490
Duchesne District	
Tabiova High School	80
Duchesne High School	162
Altamont High School	176
Total	1,519
Wasatch District	
Wasatch High School (Heber)	340

HYPOTHETICAL AREA PROGRAMS (Continued)

Schools	*Enrollment*
Park City District	
Park City High School	191
South Summit District	
South Summit High School, Kamas	316
North Summit District	
North Summit High School, Coalville	350
Total	1,199
South Sanpete District	
Garrison Valley High School	264
Monti High School	263
North Sanpete District	
Mt. Pleasant High School	343

Schools	*Enrollment*
Juab District	
Juab High School	492
Total	1,362
Millard District	
Millard High School	230
Delta High School	640
Total	870
Carbon District	
Carbon High School	920
East Carbon High School	325
Emery District	
Emery High School	306
Green River High School	173
Total	1,724

Granite, Weber, Salt Lake City, and Tooele districts may be so isolated that they cannot be combined with other districts, or they may have enough population to support a center in each district. It is recognized that this hypothetical approach may not be realistic in terms of local conditions, but it illustrates the concept of area services expressed in the chapter on Organization and Administration.

COOPERATIVE TRAINING PROGRAM

The state has started cooperative programs in office occupations, distributive occupations, and the service occupations. The service occupations program is evidently intended primarily for students with lower ability and for jobs that do not require high degrees of skill and technical knowledge. The program also involves trade and industrial occupations, and distributive and office occupations. These programs are serving a very fine purpose and should be expanded.

In addition, cooperative programs in trade and industrial occupations requiring more skill and technical knowledge should be started in every school that has sufficient places for training. There are two types of cooperative programs:

1. Cooperative classes in a specific occupational area such as auto mechanics. This program has the advantage of using a coordinator-teacher who is familiar with the occupation and the advantage of group instruction in theory and technical information.
2. Cooperative classes with students in several occupational

areas. The amount of group instruction is limited to those problems affecting all young workers, such as employer-employee relations, social security, and safety. The theory and technical information is provided through supervised individual study. Courses of study have been prepared for all the common occupations to make this instruction effective.

The cooperative training program is particularly suited to meet the needs of smaller schools that do not have enough students interested in a particular occupation to justify its being taught, and to supplement the shop programs in large schools by providing training in areas not included in the curriculum. Other advantages of the cooperative programs are:

1. They keep many boys and girls in school longer.
2. They broaden the high school curriculum without the necessity of buying expensive equipment.
3. They provide an opportunity for the school to cooperate with business and industry.
4. They relieve overcrowded classrooms.
5. They provide realistic guidance service.
6. They help to establish good public relations and increase interest in the school.
7. They offer a vocational program for schools in small communities that could not otherwise provide vocational education of this type.
8. They arouse students' interest in other subjects.
9. They provide training on real jobs and under actual working conditions.
10. They help students secure information related to occupations at the proper time.
11. They help students learn a job while attending school.
12. They help students earn while they learn.
13. They help establish correct work habits and attitudes.
14. They provide opportunities for permanent employment and an advanced start on a career.
15. They provide related instruction which prepares an employee for new work.
16. They help reduce training problems and expense.

17. Trainee efficiency and alertness are maintained and increased through counsel and cooperation of the coordinator.
18. Related instruction prevents many problems encountered with beginning workers.

If this type of program is established, high standards need to be developed, because a weak program reflects on the school more quickly than any other school activity. The same high standards need to be established in cooperative programs in other phases of vocational education, because different standards will create confusion. Such standards are available from many states that have had years of experience with cooperative training programs.

The cooperative training program may be limited to some of the service trades such as appliance service, television service, auto mechanics, cleaning and pressing, etc., because of age requirements in manufacturing industry. However, the Occupational Skill Index for Salt Lake and South Davis shows that this area will have the third largest increase in employment. The same trend probably is more true in less densely populated areas. Schools in smaller communities may have to organize cooperative classes in all areas, including distributive, office, trade and industrial, as well as agriculture and home economics related occupations.

PROGRAMS FOR SMALL SCHOOLS

Providing programs for small schools is a universal problem, and no complete solution has been found. Although Utah has the advantage of having about 85 per cent of the school enrollment in schools of reasonable size, it still must be concerned about and plan for those students in small schools.

The answer to the problem of providing adequate programs for small schools may lie, partially, in establishing area centers for trade and industrial courses and in cooperative training programs which may include all areas of vocational education. Where these programs do not prove adequate, the post-high school programs should fill the gaps.

RELATIONSHIPS OF INDUSTRIAL EDUCATION IN HIGH SCHOOL AND POST-HIGH SCHOOL PROGRAMS

The state has made a fine start in coordinating the instruction in industrial arts, high school and post-high school trade and industrial education by working closely with instructors from all three programs to determine how much can and should be taught at each level. No problem of implementation exists in the high school because the same teachers teach both industrial arts and trade and industrial education in most cases. However, a record of achievement should be submitted to the post-high school institutions when students enroll so these schools may have a fairly accurate appraisal of each student's ability and level of competence.

Facilities

The use of the post-high school facilities for high school students would provide opportunity for broadening the course offerings for high school students. This has been done in other states and is being done on a small scale in both of Utah's Trade Technical Institutes. However, there are certain problems involved in this plan:

1. Lack of space to accommodate both groups. Additional facilities and space might be more economically provided by this route than by establishing duplicate facilities in area high schools.
2. Student selection—There is frequently a feeling that the high schools are sending only their problem cases to the post-high school institution. Vocational education courses can help some problem students, but only if they are interested in the course and have an aptitude to learn it. The post-high school institution should have the final decision on the selection of students, if high school students are to be accepted.

THE TEACHING STAFF

Most of the teachers in the trade and industrial education program are industrial arts teachers who are teaching one trade and industrial class. This practice can lead to pressure to approve industrial arts teachers who do not have the practical knowledge of the occupation necessary to prepare students for employment.

Preservice Teacher Education and Certification

Utah State University has developed a plan of providing practical job experience for college credit so that teachers can be made available with both the educational background and practical job knowledge needed. This is a farsighted plan for meeting the needs for fully qualified teachers. With the dual responsibilities in industrial arts and trade and industrial education, the practical job training should be required of both. Even if an industrial arts teacher never participates in trade and industrial education, the practical experience will enrich his industrial arts instruction.

The certification requirements have been changed recently to match the teacher training plan. The state staff has recognized that all the needs cannot be met through a degree program and has allowed individuals with the necessary occupational background to be certified to teach if provisions for continuous inservice teacher education are made. This provision needs to be supplemented by Utah State University, with college credit given for previous occupational experience. This plan would encourage many teachers to work toward a degree.

Inservice Teacher Education

Very adequate provisions were found for upgrading and updating teachers as well as for providing basic teacher education to those employed directly from industry. These provisions include annual workshops, itinerant teacher education service, requirements for refresher courses in workshops or factory schools, and summer courses on the campus.

MAJOR RECOMMENDATIONS

1. **If trade and industrial education is to continue in the high school, area programs should be established.** Post-high school institutions should be utilized when possible, in order to provide a comprehensive choice of courses and trained personnel for all the needs of the state and to avoid unnecessary duplication of facilities. Fifteen such centers might be designated to serve most of the state.

2. **To encourage this plan, the state should provide financial assistance for construction and equipment.** Federal funds from the Vocational Education Act of 1963 are available for this purpose.

3. **Cooperative training programs in trade and industrial oc-**

cupations should be started in every school that has sufficient places for training. This program is particularly suited to meet the needs of smaller schools that do not have enough students interested in a particular occupation to justify its being offered, and to supplement the shop program in large schools by providing training in areas not included in the curriculum.

CHAPTER 6

TRADE AND TECHNICAL EDUCATION IN POST-SECONDARY SCHOOLS

Utah places a high value on education at both the public high school and higher education levels; but, emphasis is placed almost exclusively upon college preparatory courses in the high school and collegiate baccalaureate programs beyond high school. Labor and management within business, industry, and agriculture are recognizing more clearly the importance of the preparation of youth and adults for skilled and technical occupations in order to support the economic development of Utah. The future of the Utah economy depends upon expansion of business and industry of a highly skilled and technical nature.

Economic expansion dependent upon a higher order of tasks to be performed obviously is related to the level of education and job preparation of the people involved. Herein lies part of the strategic significance of vocational education.

Vocational education is a program planned to prepare persons for useful employment through instruction in skills, technical knowledge, work habits, attitudes, safety judgments, and appreciations which contribute to a satisfying and productive life. Vocational education serves youth and adults who are preparing to enter employment and adults who have entered occupations in agriculture, business, homemaking, distribution, trade, technical, and industrial fields requiring less than a baccalaureate degree. Vocational education contributes to the general education needs of youth, but makes its unique contribution in the field of preparation for work.

The special field of trade education is the area of vocational education concerned with preparing persons to enter skilled and semi-skilled occupations in the production, transportation, mining, service and repair, health, and public service segments of our economy.

The special field of technical education is a pattern of post-high school education, two or more years in length, planned to prepare persons to work as para-professionals in a team relationship with professionals in engineering, business, distribution, agriculture, and health fields. Since technical education draws its content from the more basic skills and technical knowledges of a profession, the technician frees the professional of selected tasks and thus enables him to work at the more complex tasks requiring the professional's full skills and knowledge.

SELECTED FEATURES OF THE UTAH ECONOMY

The nature of the economy in any state has an influence on the educational programs of the state. A review of the economy in Utah indicates that the future lies in industrial and business growth rather than in agriculture. This point of view does not mean that agriculture production is not important to the state, or that, with improvements, it could not be of greater service to the economy. But when it is realized that only 3.5 per cent of the land in Utah is under cultivation, and that only about 5 per cent of the land would be tillable if an adequate water supply were available, the importance of business and industrial growth is easily understood.

Transportation problems tend to direct the nature of industrial production. Transportation costs are a limiting factor in industrial development since all materials must be shipped by rail or motor freight to markets a great distance from Utah. Industries producing items of great bulk and involving few industrial processes are not likely to locate in Utah.

As an illustration, a bar of iron costing $5.00 might be turned into an anvil costing $10.00 with little skill and few industrial processes, but the cost of transportation in comparison with the value added by industry would be high. The same $5.00 bar of iron, however, might be processed by more sophisticated industrial processes into watch springs at a value of $5,000, with transportation costs low in comparison to the value added by such processes.

Industries adding great value to raw materials require heavy investments in machinery and skilled and technical manpower. Since the tools of production belong to an industry, dollars invested in such tools become a necessary part of doing business. Since the manpower to utilize effectively the tools of production are free agents, industry and business hesitate to make investments in training workers for the skills and knowledge required for entrance into skilled or technical occupations. Companies providing such basic training programs often find their competitors who do not have such programs, hiring those completing training for five to ten cents more per hour. Industry continues to invest in training, but its most economical investment is in completing the training of those who have had some preparatory training and in helping employed workers adjust to new industrial or business processes.

Employment Patterns

The nature of Utah's economy points up the need for preparation of skilled and technical workers to encourage and support the economic development of the state. It likewise points to the need for the employment of a higher percentage of professional people than is true in a number of other states. Estimates of the proportion of the population in professional occupations ranges from 15 to 20 per cent. These estimates are not, however, supported by facts. The employment pattern in the Salt Lake and South Davis areas, according to a 1962 Occupational Skill Index prepared by the Utah Department of Employment Security, indicates the following employment pattern:

Type of Employment	*Per Cent*
Professional	10.4
Semiprofessional	3.4
Managerial	7.0
Clerical	19.1
Sales	9.1
Service	11.0
Skilled	18.4
Semi-skilled	11.7
Unskilled	9.4
Agriculture	0.5

It may be assumed, however, that the employment pattern for these areas shows a higher percentage of the population in professional occupations than would be found in the state as a whole.

According to the 1960 census, 10.2 per cent of the population twenty-five years of age or older hold a baccalaureate degree. The professional category employed 10.4 per cent of the population at the time of the study, and the occupations in this category are the ones which require a bachelor's degree. This means that about 89 per cent of the population was employed in occupations not requiring a collegiate degree. Predictions from the U. S. Department of Labor indicate that professional occupations will increase about 50 to 55 per cent between 1960 and 1970. Such a prediction, if accurate, would project by 1970 the employment of 15 to 16 per cent of the population in those occupations requiring a baccalaureate degree, leaving 85 per cent of the persons employed in occupations which do not require a baccalaureate degree.

Other trends in employment indicate that the man who earns his living with his back is going out of business. The job trends of the future indicate that the available jobs will go to those applicants who have sufficient skills and technical knowledge to obtain employment. The worker must be willing to learn on the job, to return to school for additional skills and knowledge as the job changes, or to retrain for a new job if technological progress abolishes his job.

Educational Pattern

A review of several reports on the educational system in Utah reveals that about 80 per cent of the students entering the first grade graduate from high school. This is an enviable record in comparison with that of a number of the other states.

Studies of high school graduates who enroll in baccalaureate degree programs at the collegiate level do not agree as to the percentage entering college, with the reports varying between 45 and 54 per cent. There seems to be agreement, however, that 24 per cent of the students starting the first grade 16 or more years ago are now completing college.

According to the 1962 study of the employment pattern in Salt Lake and South Davis areas, it is possible that Utah is overproducing for available employment in the professional areas and exporting professional people to other states at a considerable cost to the state of Utah, or is producing college graduates who will not work in professional job categories.

In making funds available for additional educational programs, Utah seems to favor those which provide credit leading to a bachelor's degree. Even the existing trade and technical programs in the collegiate centers seem to be pointed toward adjustments in curriculum to provide baccalaureate degree credit. This change will mean a gradual perversion of the original intent of the program and a diversion of students from preparation for trade and technical programs to the baccalaureate programs. On the other hand, the amount of education of less than baccalaureate level provided at both high school and post-high school levels is grossly inadequate for skilled and technical occupations in terms of the existing employment pattern as revealed by the 1960 census, by the employment pattern projected by the U. S. Department of Labor, and by the needs of business, industry, and students as reflected in a later section of this chapter.

ATTITUDES OF BUSINESS AND INDUSTRY

In order to assess the attitudes of business and industry regarding needs for trade and technical education, meetings were held with representatives of these groups, including representatives from the Utah Employment Service. Luncheon meetings were held in Ogden, Salt Lake City, and Provo under the sponsorship of Weber College, Salt Lake Trade Technical Institute, and Utah Trade Technical Institute. As a result of these meetings, survey forms requesting information on employment, employment trends, employment practices, and opinions and recommendations were completed by 63 representatives of management and labor. This inquiry was made independently of the Labor and Management surveys reported in other chapters.

A review cf the responses from this limited sampling of labor and management reveals the definite need for training in a broad scope of skilled and technical occupations. While the sampling was limited to the Ogden, Salt Lake, and Provo areas, representing 85 per cent of the labor force, the need for vocational and technical training was clearly indicated. According to the responses, the most critical areas of need are as follows:

Welding and sheet metal
Carpentry
Machinist
Refrigeration and heating
Plumbing
Electrical
Practical nurses or nursing aides
Drafting
Auto mechanics
Electronics

The report on employment practices indicates clearly that persons preparing for occupations through vocational programs will not be ruled out of employment by reason of work rules or policies. The great preponderance of the employer and labor representatives (80 per cent) indicated that trained workers could be employed and placed directly into an occupation that would utilize their skills and technical knowledge. Only 8 per cent of the employers indicated that all workers must enter at their lowest level of skill and progress on the basis of seniority.

Another significant finding from the inquiry is concerned with the school level at which vocational education should be offered. Seventy-three per cent of the group recommended that vocational education courses be offered at both high school and post-high school levels. Another 10 per cent thought that vocational education should be offered only at the high school level, making a total of 83 per cent of the representatives from labor and management recommending trade education at the high school level.

It is clear, from the responses of persons in labor and management, that cooperative education is not looked upon with very great favor. The group indicated that there would be very few opportunities for the establishment of cooperative programs at the high school level. Only 17 per cent of the group indicated the ability to accept cooperative students at the high school level. A higher proportion of the respondents, 33 per cent, indicated that students could be accepted at the post-high school level into cooperative education programs. The reasons for these beliefs were not determined, but they should be pursued later.

The responses indicate that an adequate program of technical instruction for apprentices employed in industry has been provided by Weber College and Salt Lake and Utah Trade Technical Institutes.

The information gained from the study to assess the attitudes of representatives from industry and business toward vocational education correlates with reports made by the Utah Department of Employment Security. The study supports the need for:

- Additional vocational education to prepare youth and adults for employment
- Vocational education at the high school level
- An institutional rather than a cooperative education approach to instruction in both skills and knowledge.

Looking at the summary of the responses with regard to post-high school technical education, one can identify the major interests of the assembled group. The technologies of greatest interest are as follows:

Horticulture
Data processing
Executive secretarial
Junior office management
Junior accounting
Retail management
Chemical
Mechanical
Electrical
Electronics
Industrial
Metallurgical
Building and construction
Architectural drafting
Nursing
Law enforcement

It is understood that certain important persons and organizations and more sparse areas of the state were not included in the representation at the meetings in Ogden, Salt Lake City, and Provo; and that other areas of technical education may be of equal or greater importance than those listed above. The responses of the representatives from labor and management did indicate the need for the development of sound two-year post-high school technical education programs planned to prepare people for para-professional occupations designed to support or assist people employed in the professions.

OBSERVATIONS OF TRADE AND TECHNICAL EDUCATION

A review of the literature concerning the current organization and administration of trade and technical education in Utah reveals a varied pattern of administrative structures, programs, and financing. Trade and technical education is offered on a post-high school level in four-year college institutions, two-year junior colleges responsible to senior colleges, one junior college, and the two-year trade and technical institutes under control of the State Board for Vocational Education. Both two and four-year technician education programs are offered, with the technician education programs often very close in terms of final job placement to those of the trade programs. A summary of observations made during visits to several of the trade technical centers is reported as follows in order to illustrate the variations in organization:

Weber State College

Facilities. The facilities and maintenance of facilities provided are excellent. Facilities for the technician education program are in the developmental stage.

Equipment. The equipment and equipment storage procedures for the trade programs are excellent. The laboratory areas related to the technologies do not appear to be well equipped. It is questionable whether the one area being equipped as a technical laboratory will be adequate for all of the planned technologies.

Staff. The staff members teaching the practical phases of the trade programs are well-qualified by experience in their trade to provide the instruction. The related theory and technical instruction support the learning of the skills of the trade except in those where students from a number of trade areas are mixed in with regular college students.

In the technician education programs, the staff members who teach the specialty areas, such as computer programming in the business data processing technology, with one exception seem to be qualified by experience, but not by professional education, in the profession related to the technology. As an example, no graduate engineers with direct experience in engineering were teaching in the engineering related technologies.

Curriculum. The curriculum organization for the trade level programs seems to be adequate for the preparation of students to enter employment. The length of the trade programs, however, is maintained at two academic years, except for the programs operated to prepare people directly for Hill Air Force Base, which are one year in length.

The curriculum organization for the technician education programs seems to be slanted more toward the trade concepts than evolving technician education curriculum concepts. The curricula seem to be lacking in technical laboratory instruction and in physical sciences and special technical subjects. Most of the courses other than those directly related to skills are taught in the general college program.

No evaluation was made of the four-year technology program leading to a baccalaureate degree. Investigation probably should be made regarding the possible conflict of four-year technology programs and professional engineering programs.

Enrollments. The relationship of the trade and technical center to the four-year college program already seems to have an adverse effect upon enrollments. This effect can be predicted, and the decrease in enrollments in the trade and technical programs will continue if the pattern as found in other four-year institutions prevails. Student enrollment, staffing, and financing seem to seek the highest level of academic standing. The trade and two-year technology programs tend to become lesser status areas—thus the movement to four-year technologies at the baccalaureate degree level.

No enrollment standards based upon aptitudes and abilities necessary for success have been established for the different trade areas. This negligence undoubtedly contributes to the high dropout rate.

Financing. A problem in financing further development of the technician education program seems to be evident. The relationship of the federal funds to the total budget for the operation of the trade and technical programs is not clear. Students enrolling in the trade or technician education programs are being charged the regular college fee of $83.00 per quarter.

Salt Lake Trade Technical Institute

Facilities. The facilities in most cases are very inadequate, since the programs have had to adjust to remodeled space in an old building. Even though the space requirements are inadequate, every effort has been made to provide attractive and effective facilities. Plans to move to a new campus for both trade and technician education programs make unnecessary further comments on this topic.

Equipment. The equipment and tools, with the exception of two programs and the tool storage procedures for the trade programs, seem to be very adequate for the programs planned. The two exceptions are the printing trade and the machine trade. Additional and replacement equipment are needed in these two areas. No attempt was made to evaluate the equipment for the one technician education program, electronics.

Staff. Because of their trade backgrounds, the staff members teaching the practical phases of the trade programs seem to be exceptionally well-qualified. The related theory is taught by the trade teachers and students are taught as a trade group in each of the additional related technical classes, thus permitting the application of the instruction directly to the problems in the trade area.

Curriculum. The curricula planned for the trade programs seem to be adequate for the preparation of students for entrance into trades. It is noted, however, that while most of the trade programs are one academic year in length, three of the trade areas are two years in length. A question should be raised regarding the necessity for a two-year program in these trade areas.

Enrollments. The enrollments in the trade programs are increasing each year. The increase in enrollment and in scope of program seems to be limited only by the money available. Students enrolled in this educational center are not competing for status with students enrolled in four-year collegiate programs. They do not consider themselves secondary citizens.

No selection procedures are used which estimate the probable success of the students in the occupational area in which they enroll. The lack of such selection procedures contributes to a high dropout rate.

Financing. The revenue plan for the institute shows clearly the contribution made by vocational funds to the program budget for the biennium. It is evident that additional funds will be needed both for the enrollment of more students and the addition of more programs.

The present state purchasing procedures restrict the flexibility of the institute to meet training needs of business and industry. The relative short notice on manpower programs under the Manpower Development and Training Act makes necessary efficient procedures for purchasing equipment and materials.

Utah Trade Technical Institute

Facilities. The facilities provided for the vocational and technical programs are outstanding, and the maintenance of these facilities is excellent. The facilities have been prepared essentially for the trade level type of instruction (construction, maintenance, repair, and servicing) but, with some additions of special laboratories, could be used for technical education at the para-professional level.

Equipment. The equipment is also outstanding by any criteria in terms of both quantity and variety. While much of the existing laboratory and shop equipment can be used in technical level programs, additional special laboratory equipment would be needed if such programs were introduced.

Staff. The staff members teaching the practical shop and laboratory phases of the program and the theory and related technical sections seem to be very well qualified in terms of practical work experience and teacher education, either through university degrees or teacher education programs provided by Utah State University and other institutions. The students in the individual trade programs are taught as a homogeneous group in both the theory and related technical instruction, thus providing an integrated instructional program.

Curriculum. The curricula planned for the trade programs are well organized in terms of practical and related theory and technical information. It was noted, however, that the majority of the programs were two years in length. As indicated previously, the goal of most of the programs seems to lie more in the trade area. Since similar programs for industry are only one year in length and similar programs in another institution in the state are one year in length, a question is raised as to why the local programs require two years.

Enrollment. The enrollment in the trade programs is very inadequate both in terms of the needs of business and industry for graduates from such programs and the eventual needs of youth and adults for preparation in such occupations. The second year classes are particularly indefensible in terms of enrollment, indicating that students may be achieving enough in one year to become employable. The lack of selection procedures to insure the enrollment of qualified students in each of the areas may contribute to the problem of the high dropout rate.

Students in this institution are not competing for status with students enrolled in college transfer classes and therefore can invest adequate time and emphasis on the skills and technical information needed for employment.

Financing. No review was made of financing procedures in this institution.

Dixie College

The review of the vocational and technical programs in this college was not as detailed as in the institutions reported previously. The present programs offered are more at the trade level or skill level than the technical level and are going through a difficult organization period in terms of facilities, equipment, and staffing. Enrollments are low, particularly in the second year classes, again pointing to the advisability of organizing skill or trade level programs on a one-year basis.

The president of the college indicates a real desire to provide for a broad program of trade and technical programs. He indicates that he wants Dixie College to remain community and practical arts oriented. Funds are available for a new facility, and he is open to suggestions regarding programs that can be of service to people and to the area. This center is a logical place for the development of a broad program of vocational and technical education if problems of enrollment and program can be solved.

College of Southern Utah

The review of the vocational and technical programs in this college was not as detailed as that made in the three centers in the Salt Lake Area, because of the lack of time and the relatively few programs offered. The president of the college indicated the trend of the department was toward greater emphasis upon industrial arts to prepare people for high school teaching.

A review of the curricula with the individual teachers indicates the amount of instruction provided in the trade major is hardly adequate to prepare people for entrance into the skilled or trade areas. Only 10 to 10½ hours per week are spent in the trade instruction, and a large amount of the instruction provided in the remainder of the program is taught in the regular or refresher college classes. The enrollments in the programs, except for law enforcement training, are indefensibly low with very few students in second year classes. Graduates of the two-year programs are extremely rare. The facilities and equipment, except in the electronics area, seem to be adequate but unused. In the judgment of the survey staff the movement from a two-year to a four-year college organization probably will continue to have a depressing effect upon enrollments in the two-year programs.

VOCATIONAL AND TECHNICAL EDUCATION INTERESTS OF STUDENTS IN SELECTED UTAH HIGH SCHOOLS

A knowledge of student interest is important to any program of expansion and improvement of vocational and technical education. For this reason, a vocational interest survey was conducted in four high schools in Utah, selected on the basis of size and type of community served, and a technical education interest survey was conducted in one large high school.[1]

The limited scope and small numbers of vocational programs at the high school level and the low enrollments in post-high school vocational and technical programs reflect both the value structure of the people in the state and local communities, and the attitudes and interests of the students. As indicated earlier in this chapter, the low enrollments in vocational and technical education do not reflect the interests and attitudes of the business and industrial people in Utah or the people charged with furthering the industrial growth of the state.

It should be understood that opportunities for employment at the local, state, and national levels are the basic factors influencing the scope of the vocational and technical education programs made available at the high school and post-high school levels. Student interest and attitudes, however incorrect and unrealistic, need to be studied to determine the amount of effort that must be made in the guidance program to provide current and realistic information to students through occupational information programs. The results of the vocational planning questionnaire indicate that the students are much more realistic in regard to their goals than are the curricula in which they are enrolled.

It is important to note that all students in Grades 10 and 11 in the four schools surveyed were included in the survey, and that the students were given an opportunity to make a vocational choice, a college choice, or indicate no choice. The results of the vocational planning questionnaire indicate the following:

1. A large majority of the students (78.54 per cent) indicated an interest in enrolling in a vocational education program and specified the occupational area in which they would like to enroll.
2. A high percentage of the students (41.90 per cent) reported both a choice for a vocational education course at the high school level and plans to attend college.

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[1] The summary tabulations of these two studies, as well as the automobile mechanics test results reported in the next section, were too extensive and detailed to be incorporated in this report. They are, however, being filed with the Division of Vocational Education.

3. A higher percentage of the students (60.43 per cent) are planning to attend college than can succeed in college, or could be employed in professions if they did complete college.
4. A significant percentage of the students (35.75 per cent) hoped to go on to some type of education other than college after graduation from high school. (34.18 per cent of the 35.75 per cent also indicated an interest in vocational education at the high school level.)
5. Only 1.36 per cent of the students were undecided or had no preference for a particular course of study in high school.

In comparison with one other state in which the instrument has been used with about 140,000 students it was found that:

1. Approximately 2 per cent more of the students in Utah indicate an interest in vocational education.
2. Approximately 7 per cent more of the students in Utah indicate plans to attend college.
3. The Utah students demonstrate a higher consistency of vocational choice.
4. Approximately 2 per cent fewer of the Utah students were undecided or had no preference for a particular course of study in high school.

The results of the study revealed the influence of the college attendance emphasis in Utah, but it also revealed that the majority of the students have a desire to prepare for an occupation not requiring a college degree. The percentage in the four schools of those interested in enrolling in a vocational program at the high school level ranged from 75.86 per cent to 96.01 per cent. The study also reveals a wide scope of occupational choices which could be served only by a comprehensive vocational education program at both the high school and post-high school levels.

The results of the technical education questionnaire show that 54.3 per cent of the high school seniors signified an interest in enrollment in a post-high school technical education program. The students indicating an interest in technical education also specified a technical occupational area in which they would like to enroll. The major interests were in business and engineering technologies. The strong cultural and parental influence on the students was revealed again in this study when 69 per cent of the students indicating an interest in post-high school technical education expected to get this education at a college or university.

Technical education programs are normally two years in length and lead to employment in para-professional occupations rather than to a four-year collegiate program. The interests of the students in technical education are clearly indicated in the study, but great emphasis in Utah on college preparation for all affects the thinking of the youth. Over 70 per cent of the seniors in the study reported plans to enter college upon graduation.

MEASURES OF ACHIEVEMENT IN HIGH SCHOOL AND POST-HIGH SCHOOL VOCATIONAL AUTOMOBILE MECHANICS PROGRAMS

Observations of programs by qualified personnel are an important part of an evaluation procedure. A measurement of student achievement on a sampling basis can also be of assistance in making judgments and recommendations concerning vocational programs. An automobile mechanics achievement test used annually in Ohio and three surrounding states was administered to four high school and two post-high school vocational classes, in order to get a sample of student achievement. The results of the achievement tests in Utah were compared with the results for the senior automobile mechanics classes throughout Ohio. The mechanics' scores were charted as percentile norms for each of the three groups, the Utah high school, the Ohio high school, and the Utah post-high school vocational automobile mechanic senior students. The test results were analyzed as a composite of each type of school and not by individual school. Each school, however, received a copy of its results and the percentile norm charts for all groups, and a full tabulation is filed with the Division of Vocational Education.

A study of the test results for all three groups identified above reveals the following major findings:

1. No significant differences were found between the California Survey of Mental Maturity mean scores of the three groups.
2. No significant differences were found between the Stanford Arithmetic mean scores of the three groups.

3. The Utah post-high school students scored significantly higher (.001 level of confidence) than the Utah or Ohio seniors.
4. The Ohio seniors scored significantly higher (.001 level of confidence) than the Utah seniors.

Since the ability levels of the three groups seem to be constant, the differences in achievement must be due to program factors.

A study of program factors within the three groups reveals that the Utah post-high school students and the Ohio seniors are enrolled in depth programs requiring an investment of approximately three-fourths of the instructional time over a two-year period under a teacher who has earned his living at the trade. The Utah seniors, however, are provided a shorter and less intensive program, and the teacher may or may not have earned his living in the trade he is teaching.

The results of the test point up the importance of an investment in depth programs of vocational education at whatever level the instruction is provided. These programs would give emphasis to the following factors:

1. Time allotted to the instructional program (Not less than one-half day, and up to three-fourths of the day, when instruction in mathematics and science principles are included as an integral part of the program.)
2. Facilities and equipment
3. Qualifications of instructors
4. Commitment to the students' own objectives
5. Maturity of students.

It is clear that while maturity gives the students at the post-high school level an advantage in their achievement efforts, students at the high school level can achieve if provided with a program incorporating the first four factors listed above.

TEACHER EDUCATION

The organization of the teacher education program is of great importance to the post-high school trade and technical programs. In many cases, the teachers must be drawn from the ranks of the people who are working in the trade or technical occupations without the benefit of a collegiate degree. Research has proved that such occupationally competent personnel (with the help of inservice teacher education) can apply themselves to the job of teaching in such a manner as to provide quality instruction in the skill, technical, and general education functions.

The present teacher education program in Utah recognizes the need for both preservice and inservice education of trade and technical teachers. The rapid growth of programs and the increases in the numbers of teachers required for the programs have placed a burden upon all teacher education, particularly the inservice phase of the program. An additional person for inservice teacher education is needed for the trade and technical programs. Such a person should provide inservice teacher education on a planned and continuing basis in the southern section of Utah, as well as in the Salt Lake, Provo, and Ogden areas.

STATE LEVEL ORGANIZATION FOR APPROVAL AND SUPERVISION OF POST-HIGH SCHOOL TRADE AND TECHNICAL PROGRAMS

No clear-cut pattern for the organization of vocational, technical, and collegiate level education appears to be in use at the present time. The number of collegiate institutions seems to be multiplying. Such institutions tend to retain the responsibilities for trade and technical education that they had as two-year institutions. It is obvious, however, that vocational and technical education will not grow or remain true to its purpose in a four-year degree granting institution. The functions of vocational and technical education often are limited or perverted to college transfer type programs in community colleges, except under the most enlightened leadership. A master plan is needed in Utah which will take into consideration the considerable needs in Utah for vocational and technical education.

Lines of authority within the State Department of Public Instruction are clear, and cordial and cooperative working relationships are in evidence. It is recommended, however, that better coordination of program developments within post-high school vocational and technical education programs can be achieved if proposed developments, changes, and budgets for all such programs are cleared through the Division of Vocational Education before presentation to the curriculum committee. Trips to trade and technical centers throughout the state indicate that there is a tendency to proliferate the more exotic programs at the expense of the development of other needed programs.

Financial Considerations

Procedures for allocating vocational education funds to existing post-high school programs seem to be well organized on the basis of full-time student equivalents. It was not clear, however, as to what procedures were being followed to prevent duplicate allotments from the Legislature and from the Division of Vocational Education.

The present schedule for the financing of the planned construction of the new facilities for the Salt Lake Trade Technical Institute will delay the completion of this much needed facility. Every effort should be made to provide the funds needed for the development of this facility and other vocational and technical facilities in the state.

MAJOR RECOMMENDATIONS

1. **The time planned for skill level trade programs at the post-high school level should be reduced from two years to one year.** The heavy enrollment loss during the second year of the programs in each of the post-high school trade and technical centers and the fact that many of the trade programs are now offered on a one-year basis suggest that such a change is both educationally and economically sound.

2. **Two-year post-high school technical programs should be developed to prepare para-professionals as support personnel for professional people in engineering, business, distribution, health, and agriculture.** Such technical programs should draw their content from the lesser areas of the professions. Such programs should be concerned with design development, testing, and supervision. A high percentage of the teachers should be from the profession which the technician will support.

3. **Agriculture, business and office, and distribution programs should be added to the present trade and technical centers to make them vocational-technical centers.** All of the areas listed are important to the economy in Utah and need skilled people. The broadening of the program would serve better both people and industry and business.

4. **Utah should assign the coordination and supervision of all trade and technical programs to the Division of Vocational Education, regardless of the institution in which they are operated.** Such action will provide for more economy of effort with regard

to developing programs. It should also make possible the elimination of classes with an enrollment too low to justify operation.

5. **The state should complete the entire building program for Salt Lake Trade Technical Institute as soon as possible.** The need for the new and expanded facility is evident in the present enrollment figures. The slow process of funding and construction will delay much needed facilities and force an undesirable two-campus operation over a period of years.

6. **A new vocational-technical institute in the Ogden area, separate physically and administratively from Weber College, should be organized and constructed.** It is clear that there will be a downward trend in enrollments in the present two-year trade and technical programs in favor of the college transfer programs. Technical programs will tend to become four-year quasi-engineering programs.

7. **Residential facilities for vocational and technical education should be provided at Salt Lake, Provo, and the proposed new vocational-technical institute at Ogden.** Students from the sparsely populated areas of the state need to have the opportunity to attend the vocational-technical institutes on a resident basis. The addition of recreational and physical education facilities also will be desirable.

8. **Dixie College should be developed as a vocational and technical center for southern Utah.** This center has dormitory facilities and could expand programs on the vocational and technical level to provide for both drive-in and residential students. With the expansion of the collegiate program at the College of Southern Utah, the transfer credit courses at Dixie College might receive less emphasis.

9. **The trade and technical programs at the College of Southern Utah should be eliminated.** The curriculum trends and the very low enrollments suggest that the existing program is extremely expensive and moving more toward teacher education in the industrial arts field.

10. **The new Ogden, Salt Lake, and Utah vocational-technical centers should serve high school youth.** These could serve as area schools for the surrounding school districts. However, the programs should be offered during the last two years of the students' high school program with no less than one-half day in the vocational program at the center.

11. One teacher educator for trade and technical education should be added to provide inservice education. The person now employed for inservice education is doing a fine job, but, the expansion of programs indicates the need for a second person in this service.

CHAPTER 7

OFFICE OCCUPATIONS

Research shows that the office worker is a vital and growing segment of America's employed population. In a speech delivered at the National Clinic for State Supervisors of Business and Office Education in Columbus, Ohio, on May 24, 1965, Bruce I. Blackstone gave statistics which emphasized the importance of this occupational area and the need for trained workers. Some of his most pertinent statements are listed below:

- High school education is terminal for well over half of our youth.
- Half of our population is under 21 years of age.
- The growing expense of employment of workers makes it essential that they "pay their way" from the first day.
- About 40 per cent of the high school graduates who do not enter the doors of collegiate institutions, enter the world of work through a door marked OFFICE WORK. At least 11 per cent of the male and 58 per cent of the female high school graduates go through this door each year.
- Approximately 20 per cent of high school enrollees take three or more courses in business education.
- There is a chronic shortage of stenographic and skilled office personnel.
- Office work is the second largest employment area in the United States today with approximately 16 per cent of all employed persons found in this category.
- Office work is the largest employment area for women, with about one-third of the employed women in this category.
- The unemployment rate for office workers is consistently less than that found in other occupational classifications.[1]

Abstracts from *Manpower Report of the President* transmitted to the Congress, March, 1965, indicate that:

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[1] From a speech by Bruce I. Blackstone, Head, Office Education Unit, Occupations Branch, U. S. Office of Education, at the National Clinic for State Supervisors of Business and Office Education, Columbus, Ohio, May 24, 1965.

> . . . The fastest growing occupations during the next decade will continue to be the professional and technical, service, and clerical occupations.
>
> . . . The number of clerical workers needed should grow about one-third between 1964 and 1975, a rate of increase greater than that for employment as a whole.
>
> . . . Continued rapid expansion of electronic data processing is anticipated in the Federal government, especially in record-processing and other statistical applications.
>
> . . . Clerical workers in defense-related employment represented fifteen per cent of the total employed. . . .[2]

The office worker provides data for decisions, supervises and controls activities, coordinates activities, and provides communication. Automation is changing the speed and the method of doing these things. It is no longer sufficient to train a person to typewrite a little, know the debits and credits of accounting, and get along on low speed and poor accuracy in shorthand. The costs and competition of business and industry demand more.

Business education, a broader term than business and office occupations, has long formulated its philosophy and principles. The most recent restatement of these principles is as follows:

> *Principle 1.* Business education, or education for and in business experiences, is a related and an integral part of a total program of education. This total program of education, in turn is a related and an integral part of personal, occupational, and social living in an increasingly complex and changing world.
>
> *Principle 2.* Business education has two major objectives. One of them is to prepare students for and in business employment. Business education in this respect is one of the main divisions of vocational education. The second major objective is to prepare students for and in those business experiences in which *all* citizens should be proficient both in knowledge and performance. Business education in this respect is an area of general education or the *common learnings* which all enlightened citizens should have.
>
> *Principle 3.* Business training for both distributive and clerical work should be regarded as part of a properly unified program of business education. Hence, these two types of training should be so administered as to avoid competition between them and needless duplication in dealing with their common elements.

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[2] U. S. Department of Labor, *Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training* (Washington, D. C.: U. S. Government Printing Office, 1965).

Principle 4. Supervised occupational experience is a desirable part of the preparation for effective occupational life.

Principle 5. Business education can be organized and administered most effectively with the advice and support of employers and advisory committees—local, state, and national. The community from which advisory groups are drawn should be within the economic area from which students come and into which graduates go, and should not necessarily be limited to the political subdivision in which training happens to be given.

Principle 6. It is the responsibility of the school to maintain an adequate personnel program which provides guidance for each student in the problems of personal living, educational choices, occupational choice and training, and occupational adjustment.

Principle 7. Placement and occupational adjustments are primary but not exclusive responsibilities of training agencies, either public or private. However, these responsibilities cannot be discharged effectively unless administrative provision is made for handling them.

Principle 8. The functions of placement and occupational adjustments are the joint responsibilities of the whole school and the whole community. All available facilities, including parents, employees, business organizations, and placement agencies both within the school and the community should be utilized for the accomplishment of these functions.

Principle 9. Curricular material must be constantly revised and reorganized in the light of findings of occupational surveys, activity analyses, follow-up studies, and changed social and economic conditions. The surveys should cover the business community irrespective of the political subdivisions and should be considered in the light of related data such as furnished by studies of pupil mobility.

Principle 10. Specialized economic and social understandings and attitudes appropriate to the occupational experiences for which preparation is being made should be provided in addition to the economic understandings needed by all.

Principle 11. Professional service to business education is a primary obligation of every business teacher.[3]

Office occupations is a major part of all business occupations and should follow accepted principles and practices in the formulation of its policies. The preceding principles are in line with the vocational objectives found in many well-known statements of the aims of education, including those of the Commission on the Reorganization of Secondary Education, the American Youth Commission, and the Educational Policies Commission.

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[3] Paul Lomax, "Changes in the Philosophy of Business Education," National Business Education Association Yearbook, *Recent and Projected Developments Affecting Business Education*, Chapter 1. Washington, D. C.: National Business Education Association, 1964.

In attempting to analyze the program of Office Occupations in Utah, the evaluator kept in mind not only the definitions and requirements of the Vocational Education Act of 1963 but also the principles of business education listed above, which include not only the subsidized programs under the various vocational acts but also the unsubsidized or noncooperative programs.

UTAH'S WORK FORCE

Utah has a population of approximately 1,000,000 people and a civilian work force of 377,500, of which nearly 300,000 are non-agricultural and salaried workers. It has been estimated that in 1965, 5.7 per cent were unemployed—compared with a national estimate of 4.6 per cent.

Occupational composition of non-farm jobs, as compiled by the Utah State Employment Security, reveals that of 294,000 persons so employed in 1964, 55,700 were in clerical positions and 18,400 in managerial. The prediction for 1975 is a total of 415,000 persons in non-farm jobs, with 78,100 in clerical jobs and 26,300 in managerial—an increase of 40.2 per cent. (See Chart D.) The predicted increase in selected job families—clerical occupations—from 1964 to 1975 is as follows: stenographic jobs to increase by 7,800; general clerks by 4,000; bookkeepers by 2,800; machine operators by 2,000; and unclassified clerical jobs by 5,800. (See Chart E.)

HIGH SCHOOL PROGRAMS

Business and office occupations education is offered in almost all of the high schools in Utah. The total enrollment in all business subjects in 1965-66 was 31,177. In general, there are two types of programs offered—the cooperative office education program (COE) and the non-cooperative program. In 1965-66, cooperative office occupations programs were offered in 20 high schools, and two-hour block plans were offered in 43 high schools not under the COE plan.

With few exceptions, all high schools in Utah offer the typical

Chart D

OCCUPATIONAL COMPOSITION
OF NON-FARM JOBS
Utah 1964-1975
Thousands of Jobs

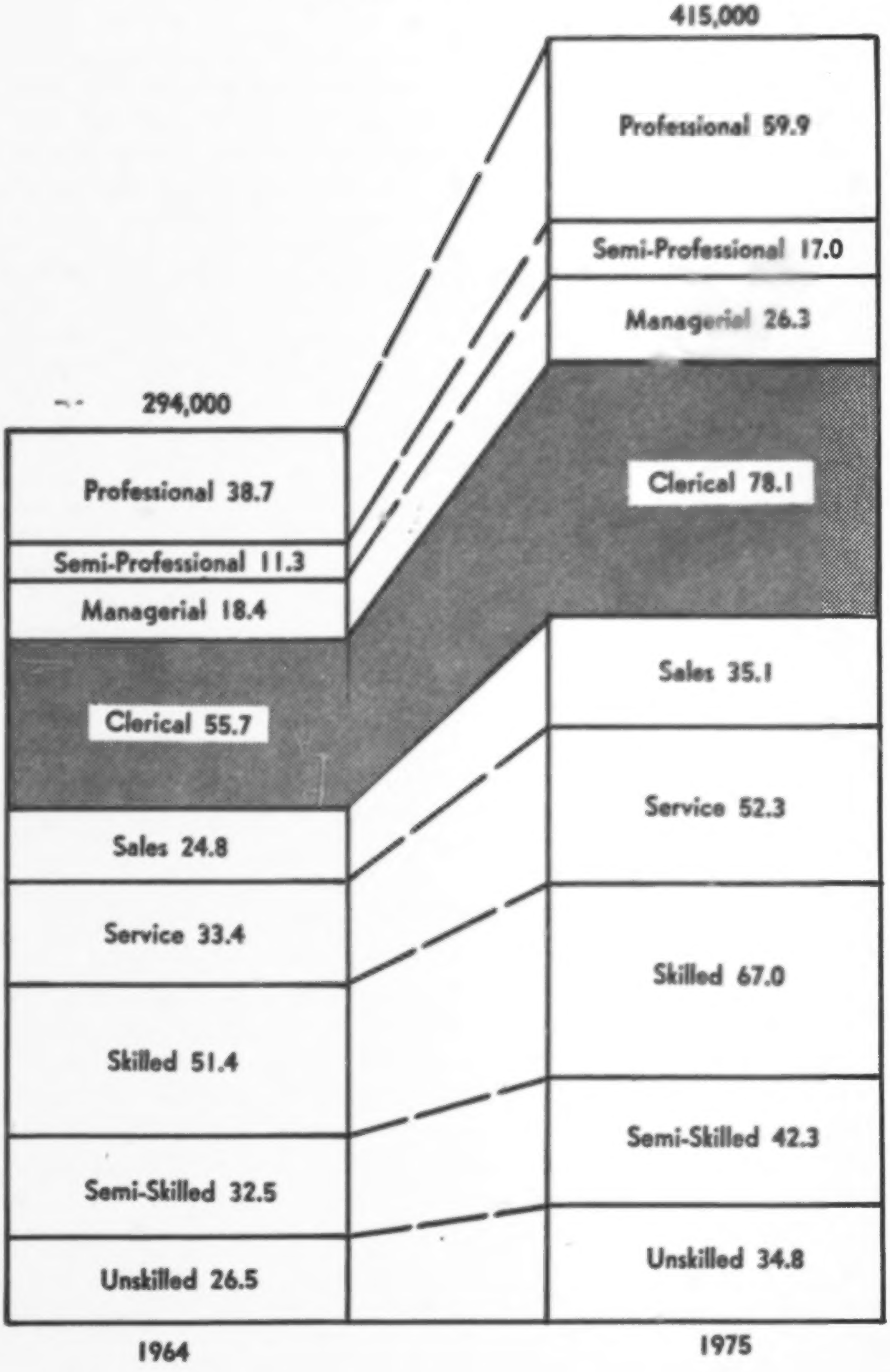
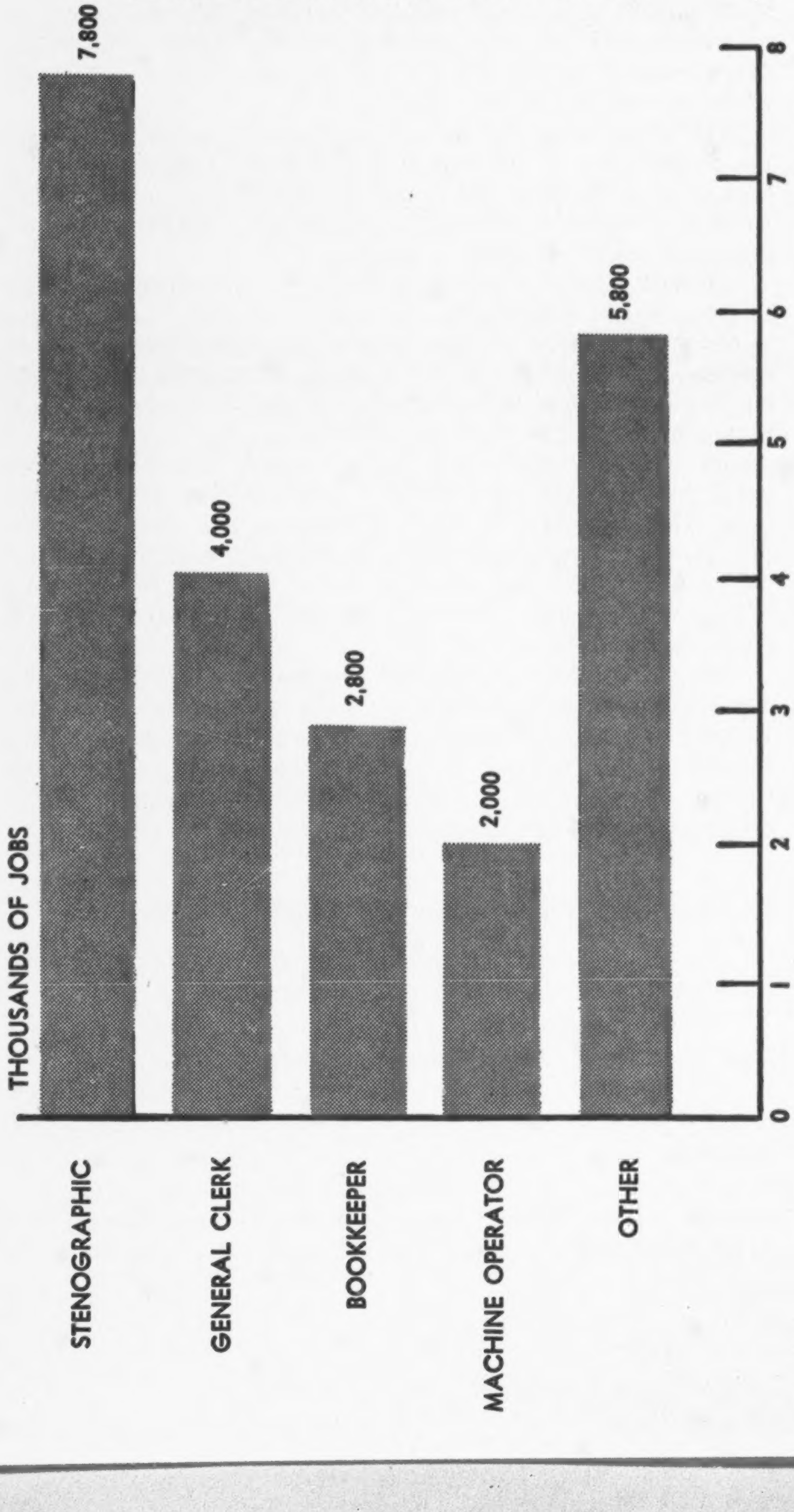


Chart E
ESTIMATED INCREASE IN NUMBER OF JOBS IN SELECTED CLERICAL OCCUPATIONS FROM 1964 TO 1975



business courses of typewriting, shorthand, and bookkeeping. Most schools offer two years of typewriting, two years of shorthand, and one year of bookkeeping. Some schools also offer business law, business mathematics, business English, office practice, and business machines.

The cooperative office education program, which has specific job preparation as its objective, has made remarkable progress since 1959, when the Vocational Division of the State Department of Public Instruction sponsored an after-school cooperative office education program.

In 1961, special legislation allowed the establishment of pilot schools with released-time programs. In 1963, approximately 600 students from 16 high schools participated in either the released-time or after school programs. The 1963 State Legislature passed House Bill 63 which provided 40 additional distribution units (an average of about $8,590 per unit) for high school vocational training programs. Office education participated in this additional funding. The passage of the Vocational Education Act of 1963 by Congress provided an opportunity for a greatly expanded office education program. It is expected that with these additional funds, cooperative office education will be offered in many schools of the state not now offering such programs.

Schools not now eligible for assistance in developing programs for business and office occupations under the Vocational Education Act of 1963 should be given assistance in qualifying for aid in the future. This assistance would provide much needed equipment and materials and would alleviate the increasing shortage of trained clerical and secretarial workers.

Requirements for Cooperative Office Education Programs

The requirements for cooperative office programs fall into three categories—student, school, and community:

Student requirements: (1) Students must be advanced business education students in the 12th grade; (2) they must work at least 180 hours in an approved work station during the senior year; (3) they must have a stated vocational objective in business.

School requirements: Schools offering these programs must provide (1) an approved business teacher to coordinate the program (employed one extra month and released from class one period each day); (2) necessary curriculum equipment and facilities for advanced business courses; (3) an advisory committee.

Community requirements: The community must (1) provide work stations for students; (2) give students as much variety in experience as practicable; (3) cooperate with the coordinator in evaluating the student and giving suggestions for instruction; (4) work with advisory committees; (5) pay students according to state and federal minimum wage laws.

Requirements for Non-cooperative Programs

The two-hour block of time which is non-COE, has the following requirements:

Student requirements: (1) The student must have a stated vocational objective; (2) should be registered for both classes of the block; (3) should be an 11th or 12th grade student.

School requirements: (1) The two-hour block must contain two advanced classes; (2) courses should lead to growth in an employable skill in office occupations; (3) different teachers may teach each class (team-teaching could be used to advantage); (4) blocks should be consecutive; (5) adequate curriculum, equipment, and facilities for advanced classes must be provided.

Requirements for a Three-hour Block (Simulated Office Experience) Program

Student requirements: (1) Students must be advanced business students in the 11th or 12th grade; (2) must have a stated vocational objective; (3) must be in all three hours of block.

School requirements: The school must (1) provide three consecutive hours of advanced business courses; (2) provide an experienced business teacher, employed an extra month for counseling and preparation, who will teach all three hours; (3) provide necessary curriculum, equipment, and facilities; (4) register the same students for all three hours; (5) provide at least one quarter of simulated office experience. (In this experience, the students are put through the steps of office work within the classroom; are associated with a business to give the operation realistic flavor and purpose; use the full range of office equipment, supplies, and papers; and rotate to different jobs within the office.)

Typical Curricula in Cooperative Office Education Programs

Year	*Stenographic*	*Clerical*	*Bkkg. and Acct.*	*Credit*
9	Gen. Bus.	Gen. Bus.	Gen. Bus.	.5
	Bus. Math.	Bus. Math.	Bus. Math.	.5
	Type I (one sem.)	Type I	Type I	.5
10	Type II	Type II		1.0
	Bkkg. I	Bkkg. I	Bkkg. I	1.0
11	Shorthand I			1.0
	Bus. Communications	Bus. Comm.	Bkkg. II	1.0
	Bus. Machines	Bus. Machines	Bus. Machines	.5
	Economics	Economics	Economics	.5
12	Business Law	Bus. Law	Bus. Law	.5
	Coop. Off. Ed.	Coop. Off. Ed.	Coop. Off. Ed.	1.0
	Sec. Procedures	Clerical Proc.	Acct. Proc.	2.0

Suggested Curricula Changes and Improvements

A course, or courses, in data processing, either with or without equipment, should be introduced in the larger high schools. Not enough emphasis is being placed upon new skills, new ways of performing repetitive tasks, and sophisticated equipment to speed the processing of data. In small schools without key punch or other data processing equipment, data processing units of considerable length that do not require the use of equipment, may be incorporated in existing courses in bookkeeping and clerical/office practice. Many such courses are available.

A course in machine shorthand should be offered in the larger high schools. Machine shorthand normally is learned in substantially less time than is symbol shorthand, and equal or superior speeds are attained in taking dictation.

The second semester of the second year of shorthand should give major attention to legal, medical, and technological vocabulary and dictation. The preparation of competent secretaries requires practice in a variety of specialized areas.

The vocational curriculum in the small high school should be organized in a three-hour block. Such a plan offers the teacher greater flexibility in allocation of time to the important techniques, skills, information, and attitudes that office workers must learn. Programs in these schools may be enriched through the greater use of resource people, field trips, and visual aids—particularly films and film strips showing office and work situations. These resources can be worked into any course offered in business and office occupations and at small cost.

Small schools should offer typewriting and shorthand for only three semesters, with a terminal course in secretarial and/or office practice offered in the fourth semester. This course would provide a better understanding of office procedures and problems than would the additional work in typewriting or shorthand.

Small schools in rural areas should consider the possibility of offering courses in agri-business and in small business operation. These courses could be substituted for second semester bookkeeping, especially for boys, and would be far more functional.

In all schools offering training in business and office occupations, greater emphasis should be placed on training for clerical jobs. A breakdown of enrollments in the business and office occupations areas reveals that 70 per cent are following the stenographic sequence; 15 per cent, the bookkeeping; and 15 per cent, the clerk-typist. With emphasis on secretarial training in most schools, boys are not encouraged to pursue business office training. For this reason, schools should study the possibilities of organizing a sequence of courses into a Junior Management Program.

Schools emphasizing secretarial training should plan to secure a transcription laboratory. These laboratories, in widespread use throughout the United States, enable the teacher to increase her efficiency, and help students to improve their speed and accuracy by selecting materials dictated at various speeds.

Emphasis should be given to information and attitude formation about the American system of private enterprise. This may be done in economics, business principles courses, or at appropriate places in other courses.

Those schools unable to offer an adequate program in business and office occupations because of lack of space, equipment, etc., should encourage pupils to enroll for specialized work at the trade-technical institutes and/or summer schools in the area. This plan would enable them to get the specialized work they would otherwise be unable to get and to be better prepared for job entrance and advancement.

Simulated offices should be planned for all schools offering full programs in business and office occupations. Since more simulated office education programs are anticipated within the next few years, a list of suggested facilities and equipment, with approximate costs, follows:

Simulated Office

Each Student Station

"L" shaped desk, 60" x 60" with single pedestal containing file drawer and supply drawer	$ 170.00
Adjustable swivel chair	23.00
Copy holder	20.00
Electric typewriter	350.00
Miscellaneous desk supplies	15.00
	$ 578.00

Room Equipment

1	Typewriter (electric, variable spacing)	$ 425.00
1	Teacher's desk	335.00
1	Steno-lab (cost depends upon previous wiring, kind of equipment, number of stations, and number of channels)	1,900.00
3	Dictating machines @ $400.00 each (these may be used in place of steno-lab)	1,200.00
1	Fluid duplicator	225.00
1	Stencil duplicator	450.00
1	Overhead projector	200.00
1	Copy machine	350.00
2	Work tables	90.00
2	10-key adding machines	450.00
1	Rotary calculator	450.00
1	Telephone system (includes tele-lecture, card dialer, push button intercom, five stations in the classroom) yearly	430.00

The total cost of classroom equipment would depend upon the number of machines purchased and whether a steno-lab or dictating machines are used.

Classroom Facilities

Carpeting on the floor for acoustical control, acoustical ceiling and walls
Fifty-foot candles of evenly distributed non-glaring light
Individual outlets for each station including the teacher desk
Duplex outlets along at least one wall (each wall containing work bench or work tables)
Sink, soap container, and paper towels.

Oftentimes, particularly in small schools, trainees in cooperative office education programs and distributive education programs work for the same business concern. In schools where this is the practice, one coordinator should serve both programs. In this way, supervision, coordination, and contact with employers can be handled more efficiently.

Teacher-coordinators who have more than 25 student trainees should have additional time for supervision. The one hour typically allowed for supervision is insufficient, particularly where considerable travel is involved, and limits the number of visits that the teacher-coordinator can make within a given period of time.

Program Evaluation

Instruments for evaluating the effectiveness of the entire business and office education programs in Utah have not been developed. Mimeographed standards for the Salt Lake City high schools were available, but the only other forms of evaluation found were those used in various subject matter areas. A suggested instrument for evaluation has been turned over to the Division of Vocational Education.

Periodic evaluations every five years will be required by the Vocational Education Act of 1963. These should include the administration, selection of students, instruction, coordination, work stations, public relations, follow-up, and other aspects of the program. The purpose of these evaluations will be to determine how adequately the needs of offices are being served.

Business machines used for instruction in the schools tallied in rank substantially with those used in business offices, as shown by a 1964 survey.

POST-HIGH SCHOOL PROGRAMS

The Salt Lake Trade Institute offers business practice programs which include a stenographic course of nine months—1,032 hours—and a bookkeeping course, also of nine months—1,032 hours. The stenographic course includes typewriting, shorthand, receptionist procedures, telephone procedures, filing, office machines, dictaphone, mimeographing, word studies, letter writing, business English, business mathematics, secretarial training, and personality development. The bookkeeping course includes typewriting, bookkeeping, office procedures, filing, office machines, business English, business mathematics, and business law.

The business and secretarial program at Utah Trade Technical Institute, Provo, Utah, includes the following: beginning typewriting, 60 clock hours, 2 credits; advanced typewriting, 60 clock hours, 2 credits; bookkeeping and accounting, 180 clock hours, 9 credits; office machines, 60 clock hours, 2 credits;

shorthand I, 60 clock hours, 4 credits; and shorthand II, 60 clock hours, 4 credits for evening school. Any combination of the above classes may be taken for a total of three hours a night.

Courses in data processing, clerical training, junior accounting, and junior management should be added to existing offerings. In 1965, 5.7 per cent of Utah's 350,000 civilian labor force were unemployed. Courses such as the above would provide additional skilled workers.

The education profile for every 100 Utah youth who enter the ninth grade, Utah's young people appears to be as follows:

100	ninth graders
— 19	high school dropouts
81	high school graduates
— 54	high school graduates who receive some kind of post-high school formal education
27	high school graduates who receive no further formal education
+ 19	dropouts
46	of the original 100 ninth graders receive no further formal education beyond the high school.[4]

Courses for high school dropouts, and culturally deprived youth and adults should be offered and expanded in communities where the need is determined. These courses should be designed not only for those who wish to continue vocational training in office occupations but also for those who are unemployed or wish to return to work—married women, for example.

A closer coordination between high schools and post-high schools offering training in business and office occupations would tend to determine common goals and avoid duplication of effort.

TEACHER EDUCATION AND CERTIFICATION

Teacher preparation programs in business and office occupations are offered in the following colleges: College of Southern Utah, Brigham Young University, University of Utah, Weber College, and Utah State University.

Although these programs, for the most part, offer adequate opportunities for teachers to acquire technical competency in content areas, some major weaknesses exist. With the recommended increased emphasis on data processing courses and methods of teaching data processing in the high schools and post-high schools, teachers need greater depth of preparation in these areas. Work experience programs offered during the summer term would enable many teachers, after a few summers, to meet the cooperative office education work experience requirement.

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[4] Cooperative Education Guide, Division of Vocational-Technical Education, Salt Lake City: State Department of Public Instruction, 1965.

In addition, courses in professional business education such as guidance, testing, the business curriculum, job analysis techniques, supervision, methods in two areas of certification, and courses in the principles and history of vocational education should be included in the teacher preparation program. Some of the professional business courses should be offered on the graduate level.

Utah should make efforts, through adequate financial assistance, to encourage teachers to undertake further professional improvement. Funds are needed (1) for inservice training programs, (2) for local and state conferences, (3) to help defray expenses to regional and national meetings, and (4) for graduate work until the master's, or higher, degree is earned. Of approximately 290 teachers in business and office occupations, 256 have the bachelor's degree and only 34 have the master's degree or higher.

Certification is obtained under the General Secondary Certificate which is a "blanket" certificate. No work experience is required for the teacher in a non-cooperative program but 2,000 hours are required for a teacher in the cooperative office education program. Many teachers do not meet this requirement. The shortage of teachers qualified to teach in the cooperative office education program is a problem of concern to the Office Occupation's Department of the Vocational Education Division. To meet the demand for qualified teachers, a recruitment program to secure vocationally qualified teachers from business and industry should be initiated. Such "new" teachers should of course, have baccalaureate degrees. Although they may not have the necessary education courses for certification, with adequate salary inducements they may be quite willing to meet such requirements.

LEADERSHIP AT THE STATE LEVEL

Business and office occupations education in Utah has made commendable progress since its inception. Under the leadership of the specialist, the department has published the *Business and Marketing Guide,* the *Cooperative Office Education Bulletin,* other informative and helpful materials, and has sponsored conferences and workshops. In addition, the specialist has supervised the work of 290 teachers scattered throughout the state and engaged in many other activities designed to promote the purpose of his office. But the duties envisioned under the office occupations program, the demands of statewide school visitations, the need for publicity and planning, the organization of inservice education activities, and meetings with business men require more time than one man can possibly give. An assistant supervisor should be appointed immediately so that the specialist may have more released time to give to the promotion of his program and to improve the image of business and office occupations in the state.

ADVISORY COMMITTEES

No advisory or consultative committees for business and office occupations were found at either the local or state level. Such committees are badly needed to improve communication and understanding between the schools, business, and the lay public. Members of these committees might include representatives of the Administrative Management Society, the Chamber of Commerce, the National Secretaries Association, and other representative business associations.

YOUTH ORGANIZATIONS

The formation of school youth organizations in business and office occupations should be a local project and, as such, should be determined by the wishes of the local school. This seems to be the practice in Utah. The largest organization in the secondary school business education area today is the Future Business Leaders of America, the youth division of the National Business Education Association, which has a membership of over 100,000. This organization has made little headway in Utah. Although youth organizations should be a matter of local concern, much can be said about the extracurricular advantages of these groups in stimulating interest in business as a career, and in providing opportunities for youth to develop leadership.

NEEDED RESEARCH

Although the department has done admirably in constructing and distributing factual materials about office education, funds for badly needed research are lacking. Many studies suggest themselves: experimental progress for slow learners and the disadvantaged; the validity of the work experience programs; success on the job of those graduates of the cooperative program vs. graduates of the non-cooperative program; special qualifications and characteristics needed for jobs in data processing; follow-up studies of graduates; the best vocational programs for the post-high school; office standards; the coordination of office occupation training programs with such training programs by other agencies, organizations, business and industry; optimum programs for small, medium-sized, and large schools; a comparison of college trained and certified teachers in office occupations with technically competent instructors who have limited professional qualifications; and many, many others. Money should be made available so that research in various facets of the business and office education programs may be undertaken.

MAJOR RECOMMENDATIONS

1. **The curricula of the high schools and the trade and technical schools should be expanded to include data processing, machine accounting, machine shorthand, and other courses motivated by technological change.**

2. **New and improved equipment should be made available as quickly as possible so that the preparation of graduates for the world of work may keep up with job requirements and the demands of business.** Transcription laboratories and simulated offices should be planned for all schools offering full programs in business and office occupations.

3. **The vocational office occupations program in the small high school should be organized in a three-hour block.** Such a plan offers the teacher greater flexibility in allocation of time to the important techniques, skills, information, and attitudes the prospective office workers must learn.

4. **Greater emphasis should be placed on training for clerical jobs.** A breakdown on enrollments in business and office occupations reveals that 70 per cent are following the stenographic sequence; 15 per cent, the bookkeeping; and 15 per cent the clerk-typist.

5. **Schools in rural areas should consider the possibility of offering courses in agri-business and in small business operations.** Such courses could substitute for second semester bookkeeping, especially for boys, and would be far more functional.

6. **Schools not now eligible for assistance in developing pro-**

grams for business and office occupations under the Utah House Bill 63 or the federal Vocational Education Act of 1963 should be given assistance in qualifying for aid in the future. This assistance would provide much needed equipment, materials, etc., and would help alleviate the increasing shortage of trained clerical and secretarial workers.

7. **A broader program of training for business teachers, particularly on the graduate level, should be provided.**

8. **Adequate financial assistance should be provided for upgrading teacher competence, professional interests, and activities.** Funds should be provided for area conferences, seminars, and workshops where instructional materials may be constructed and ideas exchanged.

9. **A recruitment program to secure vocationally-qualified teachers from business and industry should be initiated.** Most business teachers do not have these work experience qualifications. In order to start COE programs in schools desiring them, efforts should be made to secure qualified teachers with baccalaureate degrees from outside the schools.

10. **A thorough evaluation of the business and office education program should be made periodically.** This should include all aspects of the program—administration, selection of students, instruction, coordination, work stations, public relations, and follow-up.

11. **An assistant supervisor to assist the specialist in office occupations in the division of vocational education should be appointed.** The duties envisioned under the office occupations program, the demands of effective school visitation in various parts of the state, the need for publicity and planning, the production of instructional materials, the organization of workshops, conferences, etc., require more time than one man can possibly give.

12. **There should be closer coordination between high schools and post-high schools offering training in business and office occupations.** Such coordination would tend to determine common goals and avoid duplication of effort.

13. **A statewide consultative or advisory committee for business and office occupations should be established.** There is a great need for schools, particularly those training for the vocations, and business and laymen to work cooperatively. Members of this committee might include representatives of the Administrative Management Society, the Chamber of Commerce, the Na-

tional Secretaries Association, and other representative business associations.

14. **The image of business and office occupations, along with the total vocational education image, should be improved.** This means a better and more effective communication with the public and the allocation of funds for such purpose. Devices might be professionally constructed brochures and leaflets circulated among parents and business concerns; radio and educational TV programs; exhibits at fairs and in business display windows; news items to local newspapers, etc.

15. **Teacher-coordinators who have more than 25 student trainees should have additional time for supervision.** The one-hour block of time, typically allowed for supervision is insufficient, particularly where considerable travel is involved, and cuts down on the number of visits that the teacher-coordinator can make within a given period of time.

16. **State leadership should encourage local school systems to sponsor organizations of youth enrolled in office occupations programs.** These activities should cultivate the interests of youth and develop appreciation for proficiency.

17. **State support should be given to inaugurate research along many lines in the areas of office occupations.** Needed investigations might well be conducted or coordinated through a divisional research office working with graduate schools in the state.

CHAPTER 8

VOCATIONAL HOMEMAKING

In the past society has relied primarily on the family to provide an environment conducive to the growth and development of its members. However, the rapidity of change is an alarming phenomenon with which we are all familiar today. Changes which have taken place in the past few years, and those that are currently developing, have affected the family life of America. Because of these changes, some traditional patterns of family life and homemaking have become obsolete.

Our society is becoming more complex. The high rate of family mobility—from 15 to 20 per cent of the mailing addresses are changed each year—is both astonishing and disruptive, removing new families from the security of familiar surroundings and from the emotional support of the older family members. Understanding of and adaptation to recent technological advances and developments are completely outside the homemaking skills of many mothers. Services are provided now through advances in technology which require a different kind of homemaking skill in order to be able to take full advantage of these changes. Finally, more and more mothers are away from home much of the time, and the number of women in the labor force is increasing. It is evident, then, that the home can no longer be the primary source of developing homemaking skills in its younger members, and that education for homemaking and family living is becoming an increasingly important responsibility of formal schooling.

PURPOSES AND SCOPE OF HOME ECONOMICS EDUCATION

A national committee of home economics educators recently identified the purposes and scope of home economics education. They stated that the major areas of home economics on which curriculum in the secondary schools is based include human development and the family, foods and nutrition, home management and family economics, housing, and textiles and clothing. It is in home economics that all aspects of learning which affect family life—consumer economics, health, psychology, and the like—are integrated and consolidated into a unified guide to family living.

The nature of the content and its use in the life of the learner means that home economics, not exclusively but certainly to a greater extent than other school subjects, includes development of:

- Appreciation, values, and attitudes which affect the way families contribute to the development of individuals within the family and to the welfare of the community
- Skills needed in providing for the needs of the family and the maintaining of homes.

Home economics education programs geared to homemaking purposes are based on the conviction that family life may be improved through education. The home economics curriculum should consist of courses which (1) would be appropriate as electives for those whose major interests are in a different field, (2) would provide depth of understanding and knowledge of the skills of homemaking for girls interested primarily in this field, and (3) would develop competencies for wage-earning occupations using those knowledges and skills. In general, courses are either comprehensive in nature, including within one academic year the five or so major areas of home economics; or they are specialized, usually with each of the two semesters devoted to one major area of home economics.

For the first time, home economics education has the responsibility of preparing youth and adults for employment. This additional emphasis in the program is the result of the Vocational Education Act of 1963. Education for wage-earning is an extension of the existing family-centered homemaking program—not a replacement. Programs to prepare for a specific occupation are implemented only when a definite need has been determined through surveys and interviews.

TRENDS IN HOME ECONOMICS

The following have been identified as trends in home economics education at the secondary level:

1. Growth and development of junior high school home economics programs, usually comprehensive in nature
2. More emphasis on the management and relationship areas of home economics at all levels
3. Longer units of study, particularly in the later high school years, in which semester-long units to provide for greater depth in study are becoming more common
4. Increased attention to individual differences in ability,

with special courses for fast learners or college-bound students and sections for slow learners in some areas

5. Increased scholarship standards in home economics education
6. More structuring and organization of the subject matter of home economics, particularly of the basic concepts and broad generalizations of the field
7. Increased emphasis on development of the ability to think in home economics classes
8. Increasing attention to the possibilities of providing education for wage-earning as well as homemaking in home economics programs at the secondary level.[1]

PROGRAM EVALUATION

The vocational homemaking program in Utah was evaluated after visits with secondary school homemaking teachers representing graduates from each of the three institutions of higher education preparing home economics teachers; interviews with subject matter personnel, teacher trainers, and the state specialist for home economics; and a thorough study of *A Guide for Teaching Homemaking in Secondary Schools,*[2] and other printed materials made available from various state personnel. The specific schools and colleges visited were: West High School, Salt Lake City; Box Elder High School, Brigham City; Skyview High School, Cache County, Logan; Juab High School, Nephi; Cyprus High School, Granite School District, Salt Lake County; University of Utah, Salt Lake City; Utah State University, Logan; and Brigham Young University, Provo, Utah.

In Utah, homemaking is offered in approximately 62 junior high schools and 81 senior high schools, and one post-secondary school. Some of these junior and senior programs are in the same school centers. Approximately 300 junior and senior high homemaking teachers are employed with a replacement of about 70 each year. Most of the replacements are in rural areas. This low turnover would indicate a high degree of stability in the homemaking program.

The student enrollment in vocationally approved home economics classes at the secondary school level has increased each year from 1961-1965.

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[1] Elizabeth J. Simpson, "Home-Economics Education at the Secondary Level," *Vocational Education,* The Sixty-fourth Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1965.

[2] State Department of Public Instruction, Division of Vocational Education, *A Guide for Teaching Homemaking in Secondary Schools.* Salt Lake City: The Department.

1961-62	4,706
1962-63	4,772
1963-64	6,109
1964-65	9,086

The total enrollment is distributed by grade level as follows:

9th	1,619
10th	2,124
11th	1,883
12th	3,460
Boys	168

However, this increase may be directly related to the increase in the total student body and may not indicate a percentage gain in home economics.

The secondary school curriculum seemed to be very much college oriented. Several schools indicated that more than 75 per cent of their last year's graduating seniors were enrolled in college. This is higher than the national average of approximately 40 per cent. No indication was given as to how many would complete a four-year college program. The panel of consultants for Vocational Education indicated that only two of every four entering college would complete four years.

THE SECONDARY SCHOOL PROGRAMS

Vocational homemaking programs in Utah are offered in 3 junior and 62 senior high schools, one post-secondary school, and to adults in 33 school districts. Last year 9,086 were enrolled in vocational secondary school programs and 9,327 in adult programs. Approximately 300 teachers are employed by the public schools in all of the homemaking programs. The teachers in 56 of the schools (mostly rural) have Future Homemakers of America Chapters with over 4,000 members. It is estimated that in 1965 about 72 per cent of the girls in high schools in Utah were or had been enrolled in homemaking programs. Although the vocational homemaking program in Utah is basically sound because of the leadership provided on the state level and the high degree of involvement by high school teachers and college personnel in program development, some weaknesses do exist.

A Guide for Teaching Homemaking in Secondary Schools[3] recommends that not more than one year of homemaking be included in Grades 7 and 8, with one semester at each grade level being most desirable. In Grade 9, a broad, general, full year course should be available as an elective. In the senior high school, the *Guide* recommends that homemaking should be broad in scope with (1) a one-year comprehensive program which includes all areas of homemaking, (2) a one-year Home Living course, and (3) Advanced Foods and Advanced Clothing, each offered for one semester.

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[3] *Ibid.*

The recommended organization of the program at the junior high level is good. However, the program offered in the senior high school is limited in scope. The one-year program including all phases of home economics is desirable, as is the home living course, but beyond that nothing is offered in depth except foods and clothing. Homemaking as a career involves much more than working with foods and clothing. Operating a home today is a managerial job, dependent on a knowledge of purchasing, organization, consumer economics, and decision making. Home economics in the secondary school should prepare youth for these tasks—for the vocation of homemaking. With statistics showing that over 80 per cent of the clothing today is purchased ready-made, the trend of clothing construction is more of a leisure activity than one required for homemakers.

In other words, *A Guide for Teaching Homemaking in Secondary Schools* should be revised. At present it does not include plans for courses in depth other than in the foods and clothing areas. Additional semester courses should be offered in housing and home furnishings, child care and family health, and management and consumer economics. In addition, the Homemaking II program needs to be focused on the teaching of principles rather than to be taught as a service-type offering.

The secondary programs seem to be highly oriented to the college-bound student. School administrators and school counselors need a better understanding of the purposes and scope of homemaking. If effective programs are to be developed compatible with the Vocational Education Act of 1963, counselors need to become aware that there is a vocation of homemaking, and of the employment opportunities for girls with home economics knowledge and skills. Further, counselors should see vocational education as a realistic program worthy of consideration by able students. A study should be made to determine how many girls actually enter college and how many of those who enter complete a four-year program. The homemaking curriculum could then be planned to provide courses appropriate for both the college-bound and the noncollege-bound pupil.

Since the enactment of the Vocational Act of 1963, wage-earning courses have been added to several secondary schools, largely on an experimental basis. In 1965-66 eight classes were conducted—two in clothing, three in food service, two in housekeeping aides, and one in home furnishings. For the future, guides for these classes should be developed. Offerings should be based on determined opportunities for employment and should include child care as well as food service, clothing, and homemakers assistants. In preparation for these courses, a unit on the opportunities for work related to the application of home economics knowledges and skills could be included in the ninth or tenth year programs.

A workshop for the purpose of identifying needed competences and for planning appropriate learning experiences would be helpful to teachers in developing sound courses. For example, high school age girls could work very satisfactorily as housekeeping assistants in homes, hotels, and motels. However, a preparatory course must be realistic and practical. Similar workshops for teachers in other specific wage-earning areas would be valuable.

Homemaking electives can contribute to the general education of all students—boys as well as girls. The pattern of the family today finds all members cooperating within the home. Women have lost exclusive rights to many of their traditional roles. Child-bearing is about the only responsibility that is performed entirely by the female member today. Because of the breakdown of clearly defined roles, boys should be included in programs related to housing, consumer economics, relationships, and child development to enable them to participate more effectively in the home and in family living, both in their present and in their future roles. At present in Utah only a limited number of boys enroll in homemaking classes.

Utah is unique in its summer experience program, which is a part of the homemaking program. During the summer of 1965, 2,253 students participated in this phase of the program. Teachers are hired specifically for this work, and the enrollment determines the number of teachers employed by the school. The summer experience program consists of learning experiences planned and carried out in the home by the student, under the supervision of the teacher and with the cooperation of the parents. The purpose of the program is to aid in personal development of the student and to improve her contributions to home and family living.

VOCATIONAL HOMEMAKING FOR ADULTS

In any average month of 1962, there were some 23 million women at work; the forecast is for 30 million in 1970. Women now compose about 33 per cent of the gainfully employed, and about 60 per cent of these are married. Among married women, one in three is working, and three-fifths of all part-time paid work is done by married women. About 3 million are service workers (waitresses, hospital attendants, etc.). The percentage of women employed in household employment in 1960 was 24 per cent more than in 1950. It is believed that these proportions of gainfully employed women will increase.

The local schools and teachers have recognized the need for continuous education and have made programs available for out-of-school adults. In 1964-65, 33 school districts enrolled 9,327 adults, thus making homemaking the largest of any field of vocational education for adults. The courses offered and the number enrolling in each course are listed below:

Classes for employment	156
Parent education	2,633
Child development	401
Clothing selection and construction	2,220
Family finance	345
Family relations	1,120
Foods, selection, storage, etc.	469
Persons with special needs	285
Other	1,698
	9,327

Job opportunities for women, specifically in the service areas, are increasing; therefore, it would seem that more classes should be developed which would prepare older women to enter into the labor market—full or part time—or to upgrade the skills of those already employed.

PREPARATION OF TEACHERS FOR SECONDARY SCHOOLS

Teachers are prepared in home economics in three Utah institutions of higher education, namely, University of Utah, Utah State University, and Brigham Young University. The number of teaching majors was 30, 60, and 90 respectively, or a total of 180 this year. This number presents a problem in the provision of student teaching experience, and promotes a situation of having the number graduating more than twice that of the 70 available positions expected each year.

The majority of the teachers employed in homemaking are in schools having either one or two homemaking teachers. The breakdown of the schools according to number of home economics teachers is:

Number of Home Economics Teachers in the School	*Number of Departments*	
	Senior High	*Junior High*
1	46	32
2	13	47
3	11	3
4	7	
5	2	
6	2	

These figures indicate that teachers need to be prepared to teach a vocational program including all areas of home economics, for the probabilities are that there will be only the one teacher. All of the high school home economics teachers interviewed— representative of each of the three teacher education institutions—were enthusiastic about teaching. They evidently have had enthusiastic teachers in their preservice education.

TEACHER EDUCATION PROGRAMS

The teacher preparation institutions have many aspects common to all, yet each is unique in some respects. All of them have more hours of credit required in the areas of food and clothing than in the other essential areas of housing, home furnishings, human development and child care, or consumer economics and management. All of the institutions seem to be more oriented to the biological and physical sciences than to the social sciences. This is particularly noted at Brigham Young University. The number of elective hours of credit open to students is limited in all three of the institutions; however, Brigham Young University is especially rigid in its required program of home economics education. All of the institutions have some criteria for the selection of home economics education majors. The University of Utah seems to have a more thorough selection process, which consists of establishing a grade point average, a health and speech examination, a personality test, and an interest inventory.

Emphasis in the home economics education courses in the universities should be on human values. This is the focus which establishes home economics as a discipline. The curriculum is weak in this area. One way to bring about a change of emphasis in home economics education might be by lowering the requirements in foods and nutrition and clothing construction, and by expanding the requirements and electives in human and family development.

It seems that there is a lack of understanding by some of the subject matter teachers of home economics in the universities as to the current needs of high school homemaking teachers. Homemaking teachers will tend to teach those aspects in which they feel most competent, and the curricula in all three teacher preparation institutions is heavier in their requirements in foods and clothing than in any other area. The high school teachers also indicated that they felt that their preprofessional education had not prepared them to understand adolescents. The requirements in the social sciences in the three teacher preparation institutions are lower than those in the physical and biological sciences. Here is a "felt need" which an alert and dedicated department would move to satisfy.

Health education is required by law for all teacher education students. Each university requires one or more courses in physiology, nursing, and family health as a part of the curriculum for home economics education majors. This makes for duplication of material in programs that are already unduly limited in elective credits. The specific courses required by the various institutions seem more appropriate to the needs of homemaking teachers and should not be eliminated. If home economics education majors were released from taking school health, specifics of that course deemed pertinent might be integrated into one of the required courses now offered.

The home economics offerings in the universities need to be extended to permit wider selection of courses by teachers working on the fifth year program. Some of the advanced courses now required as a part of the undergraduate major could be removed from that program and be made available to teachers returning for additional work. Additional courses should be added in areas of management, housing, and family relationships and child development.

The institutions of Utah State and the University of Utah are limited in their home economics teacher education staffs. Only one is so catalogued at the University of Utah. Too small a staff necessarily limits the extent of supervision possible, the number of courses provided, and the amount of research conducted. Graduate assistants or additional full-time staff members in each institution could provide the present staff with additional time to be spent in these areas and in curriculum development. It would seem, for instance, that some research needs to be conducted pertinent to the wage-earning program, the number of girls who start college and do or do not complete four years, and the types of help to be provided the handicapped—physically, mentally, and economically.

The survey staff has not been able to find in the operational home economics programs in Utah that an outstanding contribution is being made by the state institutions' leadership in research. It may be that the teacher surplus being produced has tolerated a static program, whereas it should have made possible an exemplary program of superiority.

LEADERSHIP AT THE STATE LEVEL

The Home Economics section of the State Department of Public Instruction attempts to provide specialist services for all homemaking programs, both vocational and nonvocational. In addition, it advises the Future Homemakers of America organization, assumes responsibility for developing and assisting with the adult programs in home economics, works with the welfare program and other related organizations in providing educational opportunities for out-of-school persons, and coordinates the student teaching program of the three teacher education institutions concerned with home economics—specifically in the selection of student teaching centers. At present the staff consists of one specialist.

The Specialist of the Home Economics section should be commended for her accomplishments. The involvement of over 200 teachers in the development of *A Guide for Teaching Homemaking in Secondary Schools,* the magnitude of the adult program, the enrollment in FHA, and the extensive summer program are indications of successful leadership. However, to maintain the quality of the present program, to develop new programs in the wage-earning area, and to provide opportunities for the handicapped, additional staff personnel are needed.

An assistant has been hired as of June 15, 1966. This addition to the staff will release some time for the specialist to devote to curriculum development and to promotion of new programs. If the program is to continue to grow, and if new programs are to be implemented in keeping with new legislation such as the Vocational Act of 1963, more time and effort will be demanded of the persons in state leadership positions. Programs geared to the socially, economically, and physically handicapped are needed at the high school, post-high school, and adult levels. Even two people probably will not be able to develop adequately all of the desirable new homemaking programs that can strengthen the educational opportunities for young people and adults.

MAJOR RECOMMENDATIONS

1. **The guide for teaching homemaking in secondary schools needs to be revised.** At present it does not include plans for courses in depth in housing and home furnishings, child care and family health, and management and consumer economics. The Homemaking II program needs to be focused on the teaching of principles rather than to be taught as a service-type offering.

2. **Guides for wage-earning courses and classes need to be developed.** Offerings should be based on determined opportunities for employment. Job opportunities can be appraised. It could be assumed that expanded offerings would include opportunities in child care as well as food service, clothing, and homemakers assistants.

3. **Workshops for teachers in specific wage-earning areas should be held.** A workshop for the purpose of identifying needed competencies and planning appropriate learning experiences would be helpful to teachers in developing sound courses.

4. **High school counselors need to be educated in vocational opportunities in homemaking.** The high school programs are too college-oriented. Counselors need to see vocational education as a realistic program worthy of consideration by able students. More attention should be given to the gainful employment of the noncollege-bound student in home economics.

5. **More classes should be developed which would prepare older women to enter into the labor market—full or part-time—and to upgrading the skills of those already employed.** Job opportunities for women, specifically in the service areas, are increasing.

6. **The home economics education requirements in the universities need to be revised.** Emphasis should be on the human values. This is the focus which establishes home economics as a discipline, but is the area in which the curriculum is weak.

7. **Home economics education majors should be released from taking school health.** Health education is required by law for all teacher education students. This makes for duplication of material in programs that are already too limited in elective credits. If home economics education majors were released from taking school health, specifics of that course deemed essential could be integrated into one of the closely related courses already required by the departments.

8. **The home economics offerings in the universities need to be extended to permit wider selection of courses by teachers working on the fifth year program.** Some of the advanced courses required as a part of the undergraduate major could be removed from that program and be made available on the graduate level to teachers returning for additional work.

9. **No additional institutions should be approved for preparing homemaking teachers.** The three approved programs are preparing about twice as many teachers as there are available positions. Additional programs would aggravate the situation.

10. **Additional personnel in the home economics education staffs is needed.** Graduate assistants or full-time staff members in the University of Utah and in the Utah State University could provide the present staff with additional time to be spent in needed supervision, research, and curriculum development.

11. **Additional personnel on the state level is needed.** If the program is to continue to grow and if new programs are implemented in keeping with new legislation, one or even two people probably will not be able to exert the adequate leadership that could strengthen the educational opportunities for young people and adults in the homemaking programs. The state department staff needs at least one more person.

CHAPTER 9

VOCATIONAL IMPLICATIONS OF GUIDANCE FUNCTIONS

The opening statement of the study outline stated:

> Vocational guidance is an important integral part of the total guidance program in our schools. It cannot be isolated from educational guidance, personal guidance, or any other facet of the total guidance program. We live in a world of work. A man's job or profession is basic to his social, cultural, civic and spiritual welfare. Proper guidance concerning a vocation is, therefore, extremely important to the young person of today.

This statement set the stage for the study of a problem which seems to revolve around a still unresolved conflict between expressed belief and apparent behavior. Belief in the integrated nature of the whole guidance process seems often betrayed by the need to identify and to use the label "vocational" in order to insure that the emphasis on vocational aspects of guidance is not lost or overlooked. What must be done to be sure that the expressed belief is supported by a faith in guidance personnel that will eliminate the doubt and the constant need for reassurance? To answer this question, one must look behind the expressed statements, the printed policy, and the formalized structure, and seek to examine more carefully the individual professional personnel involved in the process at all levels.

Any study of this kind is limited by the personal backgrounds and beliefs of the key individuals who conduct the study and those with whom they come in contact. In this case, the staff member for guidance devoted greater effort to a study of people, their attitudes, their feelings, and their motivations, than he did to some of the more objective and quantifiable data available. Within the limited time available, he attempted to contact as many individuals as possible. These contacts included the following:

1. *Personnel in the State Department of Public Instruction*: The Deputy State Superintendent for Instruction, the administrators of the Divisions of Teacher Personnel, Special Educational Services, and Vocational and Technical

Education, the Coordinator of Pupil Personnel Services, Specialists in Testing and Measurement and in Career and Occupational Guidance, and two former state coordinators of pupil personnel services.

2. *Personnel in guidance positions in post-secondary institutions and school systems*: Counseling center directors from three universities, counselor at one four-year college (Weber State), presidents and guidance personnel at two trade and technical institutes (Salt Lake City and Utah Trade and Technical Institute at Provo), and administrators and guidance personnel at three public schools (Ben Lomond, Pleasant Grove, and Highlands). These visits were supplemented by a visit with the executive council members of the Utah School Counselors Association, which included representatives of all regions of the state.
3. *Counselor educators from the three major graduate programs in the state, with campus visits for program observation on two campuses.*
4. *Some key employees in the State Employment Service and in the state programs for youth services connected with the Economic Opportunity Act.*

These personal contacts were extended by many published and unpublished materials which were most helpful in understanding the scope of the problem being studied. One must always be aware, however, that short-term studies by outsiders may fail to penetrate the apparently smooth surface of efficient operation, and that some problems of qualitative program implementation may not be detected.

HISTORICAL OVERVIEW OF GUIDANCE SERVICES IN UTAH SCHOOLS

Programs existing today can best be understood in the perspective of the background and developmental patterns from which they have emerged. One of the greatest dangers in the current emphasis on federal financing of local educational programs is the apparent assumption that nothing was being done before these funds became available. All too often opportunists overlook or depreciate conscientious efforts made over many years by dedicated and competent professional leaders.

For this reason, it is very important to recognize that guidance programs existed in Utah before the passage of the NDEA in 1958, and that vocational guidance was a functional part of the total guidance program in Utah schools prior to the passage of the Vocational Education Act of 1963.

Prior to World War II, organized guidance programs in Utah schools seem to have been practically nonexistent. In some cases, individual counselors functioned and provided effective service to youth in a limited number of schools, but their role and function were determined primarily by the personal characteristics of the counselor and the individual needs of the local school. There was no supervisor of guidance services in the State Department of Public Instruction prior to 1946. During the period from 1946 to 1958, guidance programs developed in many schools and in 1958 approximately 150 individuals, labeled as counselors, were functioning in the public schools of the state. During this period three of the universities in the state had initiated or expanded programs in educational psychology which were designed for the graduate preparation of guidance personnel.

Leadership in guidance at the state level had been sporadic, however, with some intervals of dedicated and dynamic leadership from the state guidance supervisor and other intervals of the position's being vacant for months or years. Despite this apparent lack of consistent dynamic leadership from the State Department of Public Instruction, counselors and administrators in local schools had been successful in educating local teaching personnel to the need for specialized personnel, in establishing programs of testing and pupil personnel records, in developing an atmosphere in which students and staff appreciated the contribution of school counselors, and in developing within the public schools a general recognition that guidance services are an indispensable part of the public school educational program.[1]

In 1958 the identification of the position of pupil personnel director in each of the 40 school districts of the state established a pattern in which local guidance services were encouraged. The expenditure of NDEA Title V funds provided great impetus to the expansion of these guidance programs.

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[1] Division of Vocational Education, *Vocational Guidance* (Salt Lake City: Division of Vocational Guidance, State Department of Public Instruction, 1958).

By 1963 the number of counselors in the secondary schools of the state had risen to 323, with a full-time equivalent of 274 counselors for a secondary school enrollment of 105,351. This represented a counselor-student ratio of 1:416. Despite the emphasis on the academically able students inherent in the NDEA programs, high school counselors still view vocational guidance as a very important phase of their work. In a study made by Ogborn[2] which included responses from 88 per cent of the secondary school counselors of the state, the average counselor was found to be spending 19 per cent of his time on problems of vocational decisions and another 21 per cent on problems of selection of curriculum and classes. These counselors reported that problems of vocational decisions were the second most important area in their counseling work.

Even though this study revealed that "working on problems of personal adjustment" was the first area of importance in the counselor's work, another study made at the same time emphasized that this work had vocational guidance implications. In his study relating to dropouts conducted in 1963, Garth Eldredge reported:

> One attempt at a solution to the dropout problem has been to send the failing student to vocational institutes where training might be received in trade and/or technical field. It is now apparent that this attempt also has met with unsatisfactory results. . . . Such programs are not necessarily prepared to meet the needs of socially maladjusted individuals. Only when a student is capable of profiting from the training offered should he be allowed to enter.[3]

Although dropout statistics are quoted frequently as evidence of needs for greater emphasis on vocational education, the problem obviously is deeper than just making special vocational programs available in schools. Also needed are the identification of potential dropouts and the provision of general guidance assistance to them in exploring the understanding of themselves and their environment. The following comment suggests an even broader concept of vocational guidance: "The early identification of the potential dropout must occur as early in the school program as possible, preferably in the elementary grades if the schools are going to be successful in curtailing school leaving."[4]

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[2] Alton F. Ogborn, "The Counselor in Utah," *The Utah Counselor*, 1964.

[3] Garth M. Eldredge, "High School Dropouts at Salt Lake Trade Technical Institute," *The Utah Counselor*, 1964.

Vocational guidance, therefore, is no newcomer to the activities of school counselors in Utah. Its value had been recognized long before the advent of the Vocational Education Act of 1963, but the degree to which it had been integrated into the total guidance program depended upon the individual characteristics of the school and of the professional guidance personnel. By 1965 the public schools in Utah were employing, in addition to the 40 pupil personnel directors, about 390 individuals who were identified as counselors. The counselor-pupil ratio of 1:381 shown in the latest annual report on Title V, NDEA, still represented a substantial overload and meant that counselors were not able to do thoroughly all those things they were expected to do.

SOME GENERAL PATTERNS

As an overview of the nature of guidance services in the state, some patterns of significance are observable at all levels of operation.

Cooperative Relationship Between School and Community Agencies

The cooperative relationship between school and community agencies is exemplified at the state level by the functional working relationships between the State Department of Public Instruction, the Employment Security Commission, the Department of Labor, and the labor-management groups. The record gives evidence of frequent meetings to consider problem areas, friendly informal relationships between key people, and cooperation in field travel and field conferences. All of these provide a pattern of relationships for local units to follow.

On the local level, some counselors work closely with Employment Security personnel and with representatives of various youth programs. In conferences with secondary school personnel, these relationships were described to the survey staff as supporting supplementary professional services rather than as competing agencies. With the development of new programs under the Economic Opportunities Act, competing programs have seemed to develop, but efforts currently appear to be underway to achieve a more effective working relationship at the local level.

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[4] *The Utah School Dropout, 1962-64* (Salt Lake City: Utah State Board of Education, 1966).

Problem of Variation from Traditional Line-and-Staff Relationships

The broad and pervasive characteristics of a good guidance program seem to demand some variation from the administrative relationships which work smoothly for teachers in specific content areas. Individuals in guidance positions usually serve in a consultant role to many individuals across numerous administrative lines, but they also seem to face a dichotomous problem of line relationships to top administration.

The specialist in occupational and career guidance in the State Department of Public Instruction, for example, provides a consultant service for counselors in all schools without the necessity of channeling activities through superintendents, vocational education directors, pupil personnel directors, or principals. His service contacts are extensive and probably are clearly understood by only a few individuals. His line responsibilities to administration are dichotomous in that he is responsible for program and service activities to the Pupil Personnel Services branch of the Special Education Services Division, and at the same time is responsible for his budgetary and reporting activities to the administrator of the Division of Vocational Education.

The pupil personnel director on the school district level faces similar problems of broad service responsibilities to pupil personnel specialists, some of whom are directly on his staff and serve many schools, and others who are on the staff of a particular school under administrative supervision of a building principal. In his own relationships, he is responsible to the superintendent of the district, but he also has responsibilities for program planning, evaluation, and reporting to the state coordinator of pupil personnel services.

The counselors in a local school work directly with many teachers and usually are responsible directly to a building principal, but they also must work through the district pupil personnel director in much of their professional program planning and professional service activity.

Provincial Attitudes and Professional Lethargy About Broader Concerns

The emphasis on close interpersonal working relationships on the local level seems to have dulled the sense of responsibility to professional concerns on a broader scale. This is true of those on the local level who lack enthusiasm about inservice education programs sponsored by the state, those who seem to view the counselor or pupil personnel positions not as satisfying professional careers but as steppingstones to administrative assignments, and those who manufacture many weak excuses for not being identified with their national professional associations. Less than 10 per cent of the local counselors in Utah currently belong to the American Personnel and Guidance Association.

This seems true also at the state level where designated leaders demonstrate only a limited degree of identification with and enthusiasm about the professional organizations to which they might reasonably be expected to belong. In a situation where over 97 per cent of the current financing of state department guidance functions is provided from the federal level, there seems remarkably little understanding of, or aggressive support of, the national professional organizations which have been most influential in securing the legislation which supplied this support.

OPERATION AT THE STATE LEVEL

Working relationships between staff members concerned with guidance services seems to be good. This is true not only of working relationships within the pupil personnel services staff, but also between departments and between governmental agencies.

The definition of the position of the career and occupational information specialist as a liaison position within the pupil personnel services staff, but with leadership responsibilities to the Division of Vocational Education, seems an ideal solution to the problem of defining a position for vocational guidance. The selection of the present specialist seems exceptionally fortunate in terms of his background and functional relationships in the state.

One of the obvious contributions of the pupil personnel services staff was the development of the *Utah Pupil Personnel*

Services Handbook. This looseleaf collection of well-organized materials for counselors and pupil personnel directors should prove very helpful to all concerned with the development and improvement of pupil personnel services. Other obvious contributions of this staff have been the constructive leadership in the Utah School Counselors Association and the assistance in the development of and leadership in the Utah Personnel and Guidance Association.

The film and tape series in *Vocational Information and the World of Work* seems to be an excellent resource for the local counselor, and the Division of Vocational Education has made a great contribution in its development.

Staff members in both the Special Services Division and the Division of Vocational Education have shown real insight in the development of state plans which are both professionally strong and administratively flexible enough to provide a variety of approaches to further development of local programs.

Although involvement in the certification process seems to have been limited in the past, the pupil personnel services staff appears to have been actively involved in the recent development of new certification standards which place more qualitative emphasis on preparation. Some question still seems to exist, however, as to how much this staff will be involved in the consideration of marginal cases in the approval of graduate programs under the new "approved program" approach to certification.

Involvement of the pupil personnel services staff in any appraisal of proposed building plans which were reviewed by the Planning Division of the State Department of Public Instruction has been limited. Many operational problems might be forestalled if some professional appraisal and suggestions were possible at the time new building plans were being developed.

One of the greatest weaknesses in the state's plan of operation is the lack of a firm commitment to financing long-term professional leadership in guidance and related personnel services. An erratic pattern of concern and support was revealed in the historical summary section. Local districts obviously have done a far better job than has the state in identifying positions and providing continuing financial support for pupil personnel services.

Currently the state seems to be relying far too heavily on federal funds for supporting the state office activities. The nature of the services offered transcends the limits of the Vocational Education Act and the National Defense Education Act, and these basic services certainly need to be provided in the absence of either or both of these acts. From a budgetary point of view, however, the state seems to have provided only $2,500 of the $53,000 spent on state supervision in the last two years. Obviously the matching funds presented in the state plan have been made possible only by the extensive overmatching by the local schools. The state should be providing the basic core of services for about 50 per cent of the budget, and should be using the federal funds to supplement and enrich the basic program. This would require about ten times the basic state budget now being allowed.

OPERATION AT THE DISTRICT LEVEL

Leaders in Utah were very farsighted when they established the concept of the coordinated pupil personnel service program. Many other states can look to Utah as a model of administrative organization for these services in the local public schools. The establishment of the 40 local school districts and the requirement of an identified pupil personnel director in each district provide an ideal pattern for the coordination of activities of many professional consultants who have a common basic concern in the welfare of the individual student.

The professional orientation of the individuals who hold these positions, however, seems to pose a problem. When first established this group had four or five conferences each year under the leadership of the state guidance supervisor. These conferences served a very meaningful purpose in providing some uniformity of approach to statewide problems, some patterns of record-keeping and reporting, and some joint consideration of developing issues and problems. These meetings have now been reduced sharply in number, and some superintendents apparently question the need for them at all. The state director is caught between the resistance of the school administrators on the one hand to allowing any released time from school for such professional conferences, and the resistance of many pupil personnel directors on the other to using any Saturday time for such activities. Many who participated in the earlier pattern of four conferences a year saw some real values in this regular professional contact with the State Department of Public Instruction, and expressed regret at the apparent loss of recognition of professional leadership in this respect.

Closely associated with this problem is the apparent lack of professional commitment and personal dedication of some of the identified pupil personnel directors. The position of pupil personnel director seems to have drawn some individuals who see it merely as a steppingstone to some other administrative assignment and who have only limited concern for their improvement of the pupil personnel services. Other individuals in these positions are dedicated professional leaders who are seeking ways to improve the services. Apparently only about 10 per cent of these pupil personnel directors have affiliated with the American Personnel and Guidance Association and a large number of them have not yet affiliated with the Utah Personnel and Guidance Association.

Another problem at the district level is the apparent lack of involvement of the local pupil personnel director in the development of the program under the Vocational Education Act. The identification of "vocational counselors" in each school program established direct lines of responsibility from local school counselors to the state Specialist on Career and Occupational Information, by-passing the pupil personnel directors. Thus, an already established and functioning position which could have contributed to the success of the new program may have been neglected.

OPERATION AT THE LOCAL DISTRICT LEVEL

Counselors in the local schools seem to be quite variable in working with students, staff, administration, and a host of community agency personnel. Counselors in 13 schools have been involved directly in the identification of Neighborhood Youth Corps projects with the schools. In 8 other cases the leadership for these projects has developed outside the school, and the counselors are relatively less involved. Over half of the districts seem not yet to have realized the implications for the Neighborhood Youth Corps in strengthening school activities in vocational guidance and employment exploration.

No common pattern appears to exist for the identification of leadership for guidance in the local schools. Some schools have identified "senior counselors" or "head counselors," but many others have not. Administrators have identified the individual to participate in the state plan for a variety of reasons. Some have even refused to identify an individual but have insisted on splitting the assignment. Several of the counselors so designated have resisted the identification as a "vocational counselor," and some have asked to be relieved of the assignment for next year. In general, the requirement that a counselor be designated as the vocational coordinator seems sometimes to have added to the existing confusion and to have created more problems than it has solved.

Contributing to this concern and confusion, of course, is the ever-present problem of counselor overload. Although State Department of Public Instruction reports reveal a gradual improvement in this respect, the current counselor-student ratio still represents an overload of almost 30 per cent above the recommended standards of 1:300. Not reflected in these reports is the total picture which includes elementary school children. Many counselors function in settings where they are expected to provide guidance services to elementary children in addition to their high school responsibilities.

Considering statewide total enrollment statistics, the counselor-student ratio seems to vary from extremes of 1:4900 in Duchesne District to 1:770 in the Provo District, with an overall state average of about 1:1000. With overloads like these, clerical details and records are often neglected in deference to further service to students. Many aspects of vocational guidance fall in the classification of semi-clerical, and consequently may be more frequently neglected than other aspects of the job assignment.

Counselors in many of the districts already are working on ten-months contracts and thus fail to see advantages to the financing of the one-month salary by the vocational education program. Many would appreciate more help in budgets for materials and for clerical help. In many cases the additional reports required for vocational education records are seen as "one more clerical detail" and not a professional task.

THE INDIVIDUAL PROFESSIONAL COUNSELOR IN THE SCHOOL

Within the framework of the overload job situation outlined above, the individual counselor in Utah is struggling to find his professional identity. Too often he finds himself the recipient of endless routine assignments from an administrator. The counselor may be well aware of some of his own limitations and professional needs but too pressed with service obligations to find time to do anything about them. He needs more occupational information—literature, bulletin board material, teaching aids, and other materials—but, above all, he needs clerical help to keep abreast of the mass of detailed administrative tasks which have developed in his office.

One very important need is that of professional leadership at the district and state levels to help the counselor define and delimit his role in the school setting so that he can concentrate his efforts on those areas which are most significant professionally. Unfortunately, he may have become so involved in local problems that he fails to see his role in a broader sense as a professional person. He often overlooks the help that is available from his professional colleagues; he fails to utilize many of the normal channels for professional communication; he rationalizes his way out of personal professional commitments; and he fails to identify himself with the national scope of professional concern and development. Much professional growth might be accomplished through some carefully planned inservice education programs projected in local settings close to his home.

One other need which several counselors have is for a broader base of work experience themselves. The State Employment Office has some summer work experience in employment office counseling for some counselors. Consideration is under way for possible "job-exchanges" between employment counselors and school counselors to extend the understanding of each. Many counselors need to seek short-term diversified work experiences in their summer vacation period. Some work with unions to give counselors more extensive opportunities for such short-term experiences would be very helpful.

IMPLICATIONS FOR COUNSELOR EDUCATION PROGRAMS

Utah is fortunate to have some prominent and nationally known leaders in counselor education serving in its institutions of higher education. The three institutions which provide graduate programs of counselor education have given a great deal of attention in the past ten years to the development of appropriate graduate programs for school counselors. More recently, efforts have been made to differentiate programs for employment counselors. One trend now seems to be for the Utah State University at Logan to be identified more closely with programs for vocational counselors, and for the program at the University of Utah to become the major program for employment counselors. This may be both an advantage and a disadvantage, and the implications of such developments should be considered carefully.

All three institutions should give careful attention to defining the programs which will become the programs approved for certification. Particular attention should be given to the vocational information aspects of these programs. Consideration should be given to the values of a course in Theory of Vocational Choice and Career Planning. Existing programs may be educationally and psychologically oriented and may need expansion to include sociological and cultural background materials as well.

REACTIONS TO BASIC QUESTIONS

The original charge to the survey staff included several questions. These have been kept in mind during the study and evaluated from many perspectives. Differences of opinion have been noted in many cases, but survey staff members felt obligated to reach some personal conclusions and to express personal convictions on each question asked.

1. *What is the future of the trade and technical institutes and their possible inclusion under a general junior college board?*

   Based on observations of the programs, visits with many individuals about these programs, and a study of the catalogs of the universities, this consultant has concluded that these trade and technical institutes are serving a unique and needed service, not only to Utah but to surrounding states, and that their identity as a specific vocational training program should be preserved. To place them under a general junior college board, or to convert either of them to a junior college, would seem inevitably to lead to a shift in emphasis in their curriculum and service, and would seem to detract from a vocational education service which they are now providing.

2. *Should vocational guidance on the state level be administered through the Division of Vocational Education or the Division of Special Educational Services?*

   The present identification of the position as a part of the pupil personnel services staff seems very sound and to be working reasonably well.

3. *Should vocational guidance on the district level be administered through the district director of pupil personnel services or the district director of vocational education?*

   The present organization seems not to utilize the district director of pupil personnel enough. Further development could make him a strong participating member in the plan and should lead to a greater enrichment of vocational guidance activities and a more efficient handling of necessary records and reports.

4. *Should the minimum qualifications of vocational guidance counselors be different from those of a regular school counselor?*

   No. All counselors should be prepared to provide vocational guidance when needed. They should have a basic understanding of the social and economic forces which determine patterns of vocational choice and of the sources and use of occupational information and should be encouraged to utilize their summer vacation periods to obtain a diverse experience in the working world. All counselors should qualify at least for the Basic Professional Certificate endorsed for a school counselor.

5. *Should specific counselors within the schools be designated as vocational guidance counselors or should all counselors participate in the many facets of vocational guidance?*

   The designation of specific vocational counselors is contrary to modern trends in the administration of guidance programs. Vocational problems and plans are an integral part of the whole problem of personal growth and adjustment of all youth in a changing society. A good counselor must be prepared to work with all phases of this development process. Some counselors might be designated the specific responsibilities of coordinating certain aspects of record keeping, or of vocational aspects of collecting, assembling, and disseminating information for students, but even then they should not be labeled as a "vocational counselor."

6. *What additional training should be required for counselors desiring to participate in vocational guidance?*

   Every counselor should be urged to meet the requirements of the Basic Professional Certificate in Pupil Personnel Services as soon as possible, even though he does hold a valid Provisional Certificate. Furthermore, all counselors should be encouraged to qualify for the Professional Certificate as a school counselor as soon as possible. The requirements of the university programs for this second year will include the breadth and depth desirable for vocational counseling.

7. *How may the counselor's training program at the university level, both preservice and inservice, be improved?*

   The best way to guarantee the strengthening of the preservice preparation is a vigorous support of increased standards for the institutions offering these programs. A support of the Standards Statement of the Association for Counselor Education and Supervision would do much to help the colleges to secure appropriate physical facilities, resources, and personnel to provide the best possible basic programs. Several specific activities which might be undertaken to improve the continuing counselor education program are these:

   a. Finance the assignment of university counselor education staff members to a research project designed to develop, experiment with, and evaluate new courses appropriate for their campus programs. These programs should include an advanced level study of theories of vocational choice, patterns of career development, socio-economic aspects of vocational choice change, and cultural implications of factors which inhibit free choice in vocational planning.

   b. In cooperation with the staff of the State Employment Service, conduct regular programs which would provide the opportunity for counselors to experience broader contacts with employment problems, including the work of the labor unions. These might be short conferences, ongoing committee activities, or summer work experience programs. Every effort should be made to plan these programs as realistic learning experiences, some of which might qualify for university graduate credit.

c. Utilize the summer conferences on vocational guidance to involve the largest possible number of school counselors in a dynamic current experience to consider the latest developments in sociology, economics, political science, psychology and other areas, and their application to guidance at both the elementary and secondary level.

d. Finance the development by qualified counselor-educators of a program of supervised field experiences which would serve the dual purpose of providing professional growth for local counselors and of contributing to the development and more effective use of vocational materials in the local schools.

8. *What can be done to increase the scope and effectiveness of vocational guidance for all students?*

Good counselors who are professionally qualified and who have the time to carry out their professional commitments are the best assurance of a sound vocational guidance program for all students. The recommendations which follow all have a bearing on the availability of such a staff of professional counselors in the state.

MAJOR RECOMMENDATIONS

1. **The state of Utah should accept the responsibility of financing a basic program in pupil personnel services.** The present dependence on NDEA funds for over 90 per cent of the total budget is an unsound practice which provides a very unstable structure for long-term professional leadership. The state should be providing at least $25,000 per year for this pupil personnel services office to cover basic costs of the coordinator, a secretary, and necessary supply and travel funds. Available federal funds should be used to supplement and enrich these basic services, but not to replace them.

2. The State Department of Public Instruction should establish a continuing official Advisory Committee on Counselor Education and Supervision. Such a committee should include the key staff members of the pupil personnel services offices and state employment counselors office; representatives of each of the three counselor-education training programs in the state, and a representative of the Utah Personnel and Guidance Association. Such a committee should be involved actively in the development of policies for guidance services at all levels, and with the comprehensive statewide evaluation of the effectiveness of all guidance programs for the youth in the state.

3. The pupil personnel services staff should be charged with the development of a set of guidelines designed to help guidance personnel at all levels to understand more clearly their dual responsibility to serve on the one hand as pupil personnel staff specialists, and on the other hand to function in a separate channel of administrative line controls. Specialist functions operate through two separate "chains of command."

4. Some of the supplementary funds available from the Vocational Education Act should be used to set up a project fund which could be used to support specific proposals for experimental or innovative approaches to vocational guidance activities. Such funds should insure the publication and sharing of the experiences with all other counselors in the state.

5. The State Department of Public Instruction should take a dynamic and aggressive role in identifying the school counselor as a unique and essential part of the modern educational process. This activity should include definite steps to counteract the current situation in which many individuals enter guidance only as a steppingstone to an administrative assignment. Representatives of the State Department of Public Instruction should take an aggressive role in the development of more responsible professional attitudes on the part of all counselors, with the ultimate goal of leading them all to a recognition of their broad responsibilities to their profession at local, state, and national levels.

6. The existing position of the district pupil personnel director should be utilized more effectively in the recording and reporting aspects of the vocational guidance program. This utilization of services would reduce the need for direct contact with each school in the collection of data needed in the state office.

7. **The special leadership function in vocational guidance should be focused on the involvement of all counselors in vocational guidance activities as an element in continuing inservice education.**

8. **The State Department of Public Instruction should take leadership in demonstrating imagination and innovation in the effective use of available funds.** The concept of the allocation of the "extra months salary" is not a sound policy for all cases. There is a national trend toward extending the basic contract of most counselors to a ten or eleven-months period. These funds might contribute much more appropriately if they could be used for clerical services, professional travel, vocational information materials, bulletin board and display materials, or other uses deemed important by professional counselors in the local setting.

9. **In improving the counselor education aspects of the program, the danger of focusing all support funds in one institution should be avoided.** The state has three well established graduate programs of counselor education. All of these have the potential for providing supporting field services which could be closely identified with advance graduate education. A budget of at least $5,000 annually per institution would provide the base for each school to match this and expand cooperative services in sounder preservice and inservice education.

10. **Some of the funds available should be used to support some inservice projects such as short-term conferences or summer workshops.** These activities would involve school administrators in an experience that would enrich their understanding of modern developments in pupil personnel activities, and establish a better basis of cooperative relationships between them and the counselors with whom they work.

11. **Some of the program funds should be used to bring to the state some outstanding national leaders in guidance.** The State Department of Public Instruction should work cooperatively with the Utah Personnel and Guidance Association and with the Utah Counselors Association in using these people to emphasize the importance of personal identification with a strong national

professional association. Such identifications should provide the basis for continuing professional growth opportunities for each counselor. This professional growth, in turn, will provide meaningful guidance services for all students.

PART III—THE PATRONS

- **Views of Labor**
- **Views of Management**

CHAPTER 10

VIEWS OF LABOR

An effort was made by the survey staff member representing Labor to: (1) ascertain what is being offered in the way of vocational education in Utah institutions; (2) seek out the feelings, understandings, and knowledges among the trade union leaders in Utah toward vocational education, as such; and (3) relate the two sets of findings to what seems to be the need for changes in the vocational education program in Utah.

Study Procedures

Approximately four full days were spent in on-the-spot visits to schools. Two separate meetings were held with union leaders in the Salt Lake City and Ogden areas on the subject of this survey. Separate discussions on the posture and program of vocational education in Utah were held with two members of the State Advisory Council. The Labor staff member visited briefly with the presidents of both trade and technical institutes (Provo and Salt Lake City); and reviewed the literature and program announcements of one school district, Weber College, and the two trade-tech institutes. Additionally, he benefited from an overview of the Utah program with Utah's Vocational Administrator. Accompanying the staff member in the Ogden area on one of the four days of school visits was the Secretary-Treasurer of the Utah AFL-CIO. All of the school visits were made to classes, shops, or counselors' offices. The only exception was the visit with the vocational director and one of his assistants in the Ogden City School District, where the visit was made to the administrative headquarters.

Sampling observations were made in trade and technical education, some industrial arts programs, one each of office occupation and distributive education programs, and two vocational agricultural programs. In four instances, the kinds of vocational counselor programs that were being undertaken were probed. In two of these cases, some time was spent with one or more guidance counselors, including in each case the counselor designated as the "vocational" counselor.

The original study plan was to visit several junior high schools to find out what kind of orientation, liaison, and articulation or coordination was set up in the pre-testing and other programs with the high schools of anticipated student attendance. Questions in two of the school districts and one actual visit in another led to the conclusion that this was generally a waste of time, because there is little junior-senior high school coordination in the vocational area in any of these school districts.

Conferences were held with full-time union officers in unions directly interested in ongoing institutional vocational education programs, including the so-called apprenticeable crafts such as machinists, plumbers and steamfitters, electricians, carpenters, and sheet metal workers.

Finally, the survey staff Labor representative attended the week-long vocational education conference held in June 1966 on the campus of Utah State University. While there he took a look at Salt Lake City's trade-tech facilities.

FINDINGS

The results of the study procedures led to observations and conclusions reported here as "findings." These are not necessarily in any order of priority.

The Labor Community

Generally speaking, the labor community has taken an interest in vocational education programs only in a respective area of work or jurisdiction. For the most part, this means that the only significant involvement is in the apprenticeship programs and only in the area of the particular craft or trade involved.

The school community, itself, is not much aware of the labor community, especially in the secondary schools. Even in particular shop programs the instructors who carry a union card in that craft have not related their own program very directly to the union community or the world of work.

Except at the trade-tech schools and Weber College, advisory councils to a secondary school program or advisory committees to a particular division of any vocational or technical education program apparently seldom exist, and if they do exist have few if any representatives from the labor community. In this regard, apparently local union leaders, as well as school officials and teachers, have not been sufficiently concerned to demand representation.

Any kind of vocational program in any kind of school should have no fewer than 25 per cent of its community advisors from the workingman's community. The workingman's community will be, usually, the union community, since the unorganized workingman is not represented by any kind of responsible, knowledgeable spokesman. If this involvement demands reimbursement of wage loss when labor leaders or other workers must take time off a private payroll, it is an expense worth the investment.

At the state level, a seven-member advisory council to the State Board for Vocational Education does have a highly qualified and very responsible representative in the person of a member of the International Brotherhood of Electrical Workers, AFL-CIO. The state-level relationships between the business-industry and labor leadership communities are positive and generally found to be in agreement. In one sense this is unusual. In another sense vocational education might be the one area where labor and management are most likely to agree because both want workers to be able to perform on a job. Training has much to do with this performance. Cooperation between labor and management in supporting trade-tech training helps both.

Labor leadership in Utah is concerned because vocational programs are often given a secondary place in the high school curriculum. It observes that too frequently the school shops are simply the places where the academic failures are assigned with the hope that these youth might be kept in some kind of school program.

In many states, vocational education programs—which train youth to take non-union jobs at lesser rates of pay than those offered by the union and, as a result, break down job standards that the labor movement has fought so hard to establish—are looked upon by union leadership as a threat to their unions. This concern does not seem to be felt as strongly in Utah as it is elsewhere in the nation.

There is little concern shown at the moment about whether or not vocational programs should be highly integrated with academic programs, especially in the secondary schools and in apprenticeship programs. However, the labor leadership is very much aware that the tendency in the family and social communities of Utah is to push all children, if at all possible, into college academic training; and is sensitive to the resultant de-emphasis, during the crucial formative years of school training, upon both the values and needs of prevocational, vocational, and technical training and jobs.

Labor leaders are apparently receptive to expanding their own role in support of vocational education at both the institutional and on-the-job levels, whether this be by advisory committees and councils or by direct engagement in the training programs themselves. Two of the instructors interviewed in two separate school districts were union members. They carried cards in their trades primarily so they could increase their earning capacities during the summer months, and not because they had especially thought about how their respective unions and leaders might help enrich the vocational program in which they were teaching.

Labor leadership at this time separates its thinking between the two areas of (a) on-the-job training—through programs initiated by MDTA and OEO, in particular—and (b) the school programs of vocational training. It is unfortunate that these two areas are not appreciated as parts of a whole.

Basic and prevocational education programs for OEO, Neighborhood Youth Corps, and Youth Opportunity Centers should be coordinated by vocational education, not only to secure quality in the program but to remove these people from the alienated society in which they find themselves. This coordination of effort and activities needs immediate attention. If it can be accomplished through the related state agencies of employment and vocational education, fine. But generally it is not. Within schools, themselves, however, there should be a closely coordinated job development program, whether it be for employment upon completion of a course of instruction, work-study, or OJT opportunity. The obvious weak area here is the lower skill classifications, particularly as they relate to getting persons who have dropped out of school, especially in cultural or ethnic minority communities, back into a program.

Programs in the School Community

The attitude of the school district or college or trade-tech varies locally toward both (a) the scope of the program of the particular institutions and (b) the role of the labor leadership and community in reference to the school's program. At Provo, for instance, the trade-tech public relations officer was not sure just who the labor leaders were on the advisory committees; thought there were some on every committee; found out that he could not identify more than one in one area; and promised that "we are doing something about it." In most instances, except at Weber College, the attitude was somewhat the same.

Of a total of 35 members of the "Advisory Committee Roster" of Salt Lake Trade Technical Institute, only 3 are identified as trade union officers. Although they do cover 3 jurisdictional areas, at least one of which is particularly related to a heavily enrolled area of training (machinists), the representation is not comprehensive. On other specific area committees, the appropriate joint apprenticeship committees are, of course, established. Although names are identifiable with position, the assumption made is that these are set up, under normal standards, with equal representation from the trades and the employers. In the non-apprenticeship areas, however, 14 advisory committees include only 2 trade union officers, with one person each identifiable with the labor movement. One is a repeat from the general advisory committee roster—the same machinist. It is possible that on the barbering committee several are union barbers, even if they have their own shops. However, no casual identification assures this.

Most vocational education teachers appear to have little contact with the outside community relative to job development, or even an assessment of job opportunity (whether or not the employment market for a training area is primarily local or elsewhere). Only one instructor was found who was directly involved in job placement, or "training stations" as he referred to his program. It meant, though, that primarily on his own time—not on school time—after teaching a full load all day, he had made and maintained excellent employer contacts in the community. Perhaps the area of his work, business education, accounted for this, but he was very alert to the kind of training he was doing and for what kind of job opportunity. One other instructor, who obviously was doing an excellent job in teaching the entire perspective of construction in the small home industry, had one principal concern with the community—whether or not he could actually take high school students out to the job and participate in home building as pre-apprentices in any of several crafts (especially carpentry), and whether or not the local school board would give in to community pressures if his shop were expanded into an outer area so he could have the students build small mountain homes which could be sold and moved off to mountain sites for occupancy. Here, he understood the school board's concern with private business (and probably working crafts under contract to those businesses), but he was desperately looking for more than just a "lab shop" situation to make his teaching more effective. Most instructors, however, were not directly concerned with the general economic and social effects of their teaching upon either the immediate community or the highly mobile job market. Their concerns appeared to be academic and institutional.

On-the-job training should be provided increasingly in nonschool facilities. The best kind of job skill training is on-the-job training. This could mean that the state should not wait for heavy facilities investments that are desperately needed from federal agencies. If employers' premises are to be used, the saving to the state in fixed plant expense traditionally met in vocational institutions would be enough to reimburse modestly employers who use their plant space and supervisory help. However, supervisors on the job must be trained in teaching techniques to make their job trainee's role a successful one, and this training should be performed under institutional and joint-employee committee guidance. Vocational education is too highly institutionalized in Utah at the moment. Within a few years, progress should be made to provide "laboratory" space for at least 25 per cent of the training on employer (public or private) premises.

Vocational agricultural programs seemed to make the most sense in one district visited (Box Elder High School). Obviously, vocational agriculture is a shifting field. Job markets are becoming more corporate than family farm related. Commercial methods of production of agricultural products are constantly changing. Grounds and areas around schools are hardly related to the training programs. The farm machinery parts of the programs are so closely allied with general machine shop programs that they are hard to differentiate. One of the programs, and perhaps this is typical, primarily emphasized avocational rather than vocational interests, yet it is written up in such a way, perhaps, that it can still draw both state and federal funds. The instructor apparently knew that such funds sustained his shop program, even though he was primarily limited to growing plants indoors, landscaping and planting them outside during the season for city dwellers to have gardens, etc.

Vocational counseling should be resolved. Apparently no way has been found to determine whether a school needs "general guidance" or "specialized vocational" counselors. Vocational counseling must be adequate. Local and area job markets, whether permanent or seasonal, must be fully known and analyzed. The economic community, both management and labor, must be known to the school and the school to it. Avocational opportunities must not be confused with vocational programs. Parents and guardians must be in close touch with the prevocational planning of students who have not completed high school courses. Religious, political, governmental, and charitable institutions must be kept advised of the needs of vocational education as well as the opportunities offered in this area.

Junior high school counseling and testing are not necessarily coordinated with the continuation of the testing and evaluation program in effect in most high schools, especially regarding aptitudes and guidance in building a high school curriculum. Counselors desire generally to be better versed in vocational guidance than they are required to be. They are not certain whether this can be brought to them best by regular institute type programs, or whether they need to be allotted time for visits in depth to the principal employment areas in their respective communities. They recognize they are working under limitations in a system where (a) tests are generally aimed at academic standards and norms, and (b) placement of students is primarily related to academic and pre-college programs.

Most counselors come out of academic and educational programs. This does not mean that they cannot understand vicariously the vocational emphases, but it does mean that most of them apparently do little vocational counseling and are simply administrative go-betweens when students in the secondary schools elect to take one or more vocational electives.

No high school counselor should have a counseling load exceeding 300 students. Summer or special programs should be established to acquaint all counselors with the job and with the economic community in which their school and program are situated. All should know the principal employers and all union business agents or principal officers in local unions. No less than one counselor out of 3 should be a person who, himself, is proficient in a business or trade that is considered nonacademic, with at least 5 years experience in that business or trade. Counseling and guidance are a total function; they cannot be isolated between the academic and shop areas of an institution.

In no school visited was there found a required vocational course prerequisite to high school graduation, yet jobs are basic to adult economic survival. Every high school student, preferably at the tenth and/or eleventh grade level, should be required to take at least two courses from perhaps a choice of five or six. One of these should deal with the general area of "the world of work," including job opportunities, labor and business economics, labor-management patterns and relationships, employer and employee attitudes and responsibilities, applying for work, ascertaining potential fields of competence and interest in selecting job preparations, etc. The other should deal with the manual, blue collar or technical skills to be selected after counseling among the faculty who have taught the more general "world of work" courses, the parents or guardians, the individual student, and the counselor in charge of his vocational guidance. The schools visited were making little or no effort to bring labor leadership into class situations to acquaint students with the problems of workers, or general and specific qualifications required to hold particular jobs in today's world of work. Students should be given every possible opportunity to assure themselves that most of the jobs in anyone's society are not necessarily dependent upon either academic college training or non-manual dexterities. No young person should pass through the new American school without feeling some kinship for the value and importance of both work and jobs.

The educational experiences provided for the development of the appreciation of the world of work will, of necessity, be such that an understanding and appreciation of many cultural values will follow. These should include:

1. A positive philosophy about labor-management relations in the American economy, including the need of sound and progressive labor-management contracts

2. An appreciation of the cost-price field, including consumer economics

3. An understanding of the fundamental beliefs on which American democratic institutions are based, including responsibilities within the democratic framework of an individual as both a citizen and a worker

4. The need for a concern for the welfare of others, both on the job where one works and in the general social responsibilities of the American welfare system

5. The responsibility which a worker must take toward the requirements of his job, his employer's well-being, and his union's welfare.

Work-study programs should be organized in each high school for at least one year of the secondary school curriculum, preferably the 11th or 12th. This will demand the greatest community development of all but, realistically, is the best pattern of drawing school and community closely together for reasons other than taxpaying and tax supporting purposes. If these work-study programs are to be effective, one full-time community development person will be needed on the staff of the school district for about every 350 students in enrollment from Grade 7 through Grade 12. Not all areas will be easily adaptable to this recommendation; but no urban area should be without such a program and the greatest amount of Utah population is concentrated in urban areas.

The cooperative program—involving pupil placement in work-study employment arrangements—demands the decreasing of the teacher-student-class-clock load in the institutional curricular programs. If a teacher is expected to supervise the placement and on-the-job relationships of students and employer, 3 hours of class instruction and a maximum of 50 students in job placement supervision should be more than a full load, and the work should be done on school time and expense—not the teacher's.

In paper work observed in vocational education situations, misspelled words were noted in at least half of the shops visited (including Weber College). Here, it was not that communication failed, but that the academic/vocational liaison which should have been a two-way street was weak on both ends of the line. Business English in the regular curriculum, and sometimes Business Math (although shop teachers, for the most part, developed their own math for their own courses), are the only courses apparently related to both academic and vocational areas, yet these are not necessarily coordinated.

Positive steps should be taken to serve the academic needs of students in the trade-tech schools. These are unique and worthy institutions and should not be swallowed up by the academic community of either junior colleges or the institutions of higher learning. However, liaison between them and higher educational institutions must be strengthened on the basis of the limited academic course offerings now advertised by both schools—Salt Lake City and Provo. No young person, with or without a high school diploma, can afford to consider himself ready for work with skill training only. For every 6 hours of job skill training, 2 hours of training should be required in any one or more of these areas: language arts, English, social sciences—especially economics and sociology—and the humanities. This concept can be added effectively to the trade-tech schools without adding to faculty or curriculum. Contracts should be arranged between secondary schools, community colleges, and universities (both public and private) to develop "extension" offerings under roof or in a convenient, nearby location for these course requirements.

Plant facilities, generally, were found to be good and most of the shops were well-outfitted. The existence of programs and enrollment in programs were about the average of at least four other states of the Midwest and Rocky Mountain West. However, it was quite evident that shops were not necessarily planned by instructors, themselves, for space, flexibility, or fixed equipment. As a result money probably has been wasted in some of this investment. Teachers, business leaders, labor leaders, and governmental experts have not been too highly involved even in the planning of new school plants, with resulting loss of efficient use of space or inappropriate purchases of equipment in the larger and "heavier" equipped facilities.

Plant facilities in the high schools appear to be underutilized. Most classes were enrolled below normally efficient teaching loads for far too few hours of the day. Whether job opportunities, inadequate counseling, or failure of school administration is the cause of this finding is difficult to say. Nonetheless, either vocational or avocational training or both could be considerably increased within a total community in most of the secondary school situations.

In the rapidly changing areas of vocational needs, too little effort is made to determine whether instructors really are up to date in their knowledge and teaching abilities. This is particularly true in the electronics field. Even the small high school in the out-of-way communities needs attention. One such visit—to Grand County High in Moab—pointed up the case where a vocational instructor, a carpenter and teamster by trade, had begun work on automotive mechanics without proper facilities, equipment, or training. He stated that he was not truly qualified in this area, but pointed out that at least the school board had let him get started in an area where boys can be placed in jobs even though it had not seen fit to invest in getting a qualified instructor.

There is little evidence that the OEO (War on Poverty) or MDTA (Training and Retraining programs under the Office of Manpower of the Department of Labor) have any relationship to the vocational programs in any Utah institution. The size of minority group communities and the nature of their "disadvantage" in Utah were not determined, but the director in one school district did have classes for the "disadvantaged" and seemed to be struggling to relate them to the rest of his program. Attitudes do not seem to direct thinking in this area, even though the fact that 15 of the 36 persons in one class were named "Martinez" has some relevancy at least to the problem at hand.

Generally, vocational education is set apart from the rest of the school program. Both academic and vocational education groups appear to contribute to and/or accept this separateness.

Personnel in the School Community

Teachers and administrators in Utah's vocational programs express the deep concern that their public image should be changed. The only way to change images in a fundamental and valid manner is to change the roles of the image makers—the teachers and administrators. A closer tie between the business and working communities for both teachers and administrators will be a role change and, therefore, an image change.

Conference sessions at Utah State all seemed to stress that "there is a proper way to do things." In the administration of vocational programs at local district, college, or institute level, programs often break down because the "proper way to do things" is to follow administrative directives even when the directives do not necessarily enhance the values in the vocational program. Utah is apparently not dissimilar to other states in this regard. It is true that programs are more successful when orderly in both planning and administration, but this consultant suspects that many programs in Utah are not up to par simply because the teachers in the program become slaves to administrative decree.

Utah should cease asking teachers to "do things for nothing." If annual conferences are to be held, full teachers' pay and travel and per diem expenses should be allocated. Some teachers at the conference in Logan were "on their own"; some received $100 for the week without regard to travel time, costs, or forfeiture of summer employment elsewhere. The vocational program ought to be considered on a year-round basis. Conferences similar to the one in Logan are beneficial and probably should be held every third year, with every vocational teacher in the state required to be present—but on full pay for full summer's employment. Institutes and conferences are to be encouraged if persons who have ideas and new thinking are invited to lead the institute programs. The survey staff recommends an expansion of this approach.

When institutes are held, the program should have just as many leaders and consultants and teachers from the business and labor communities as from the school administrative, college level, and teaching communities. Many institutes lose their flavor because they are simply educators talking with and to more educators.

In the business and distributive education programs, the academic and vocational programs need to be interlocked. Vocational directors and academic supervisors should be working closely together. In districts that have at least 1,000 or more students in junior and senior high school enrollments, one full-time administrative officer should be assigned to coordinate vocational-academic curriculums, probably by state mandate and at state expense. This proposed office should coordinate the testing, evaluation, curricular offerings, subject matter content, and the like, in order to bring about a closer relationship between the academic program and the vocational program. As is true in most parts of the nation, Utah's academic and vocational programs are badly in need of integration rather than separation at the school district level.

The vocational education programs, themselves, need much stronger coordination and integration than now appears to be the case. The cleavage between the office and distributive fields of study and between the industrial and agricultural fields is too marked. Vocational directors, who obviously must have a specialty in one of the fields, should perhaps be given an intensive course at this time in the problems and potentials of each of the vocational fields, with the hope that coordination will improve rather than suffer under the special emphasis of one field over another.

All vocational teachers should be placed on an eleven-months school year, even if classes are not in operation during this entire time, with one month allowed for vacation periods. If this necessitates a quarter or semester of sabbatical leaves for such teachers every seventh or tenth year, this would be in order.

Some of the best vocational programs are those that have federal monies involved. Especially good is the training programs set up through Weber College for the special requirements of Hill Air Force Base. When defense requirements of the nation shift, however, the ingredients of this kind of program should be preserved and the facilities and benefits converted to ongoing training needs, especially in the constantly expanding electronics industries.

General vocational funding, both federal and state—especially state, since Utah can control a certain part of its own programs—is strongly recommended. The fact that funds for T & I, vocational agriculture, etc. are often inappropriate to some school systems should not negate the ability of that system to use a like apportionment of funds in more appropriate areas, such as distributive and business education. The job market of a community or area should reflect the kind of dollars and the kind of programs that the area requires, regardless of the field. It appears that the pronounced federal earmarking of funds in traditionally supported programs has distorted the vocational programming in Utah (and probably other states). In vocational agriculture and homemaking, in particular, funding favors these programs in greater proportion than the job market reflects. In business, distributive, trades and industrial, and technical programs, the funding appears to be generally lesser than the requirements of the job market for institutional and on-the-job training. Utah should consider compensatory funding in such instances, even as the needs vary from school district to district (or college or institute, as the case may be).

Utah badly needs, even with all that it has already provided, equipment funding for the modern technological demands—especially in the electronic and machine tool and equipment shops. Perhaps the only way to provide this is by "lease" or "lease purchase" agreements, but it is vital and required if programs within the institutions are to keep pace.

Vocational education needs a coordinated public information service, preferably at the state level, to make better use of press, radio, and TV; to reach the total school faculties of the state, including the academic areas; and to provoke involvement, to a much greater extent, of the business and labor communities.

Some of the expressed conclusions of groups participating in the Logan conferences made real sense because they had a rank-and-file ring. One of the conclusions that needs underscoring in most Utah districts is that opportunities should be provided for teacher appearances before many community groups to explain and discuss subjects of vocational specialties and employment opportunities.

MAJOR RECOMMENDATIONS

1. **Advisory committees for all vocational programs should have at least 25 per cent of their membership comprised of representatives from the workingman's community.** The workingman's community, as a rule, will be the union community, since the unorganized workingman is not represented by any kind of responsible, knowledgeable spokesman. If this involvement demands reimbursement of wage loss, then this is an expense that the union community had best face for the good of the state.

2. **Vocational education should coordinate the basic and prevocational education programs for OEO, Neighborhood Youth Corps, and Youth Opportunity Centers.** This coordination would help not only to secure quality in the programs but also to remove those people in the programs from the alienated society in which they find themselves.

3. **On-the-job training should be provided increasingly in nonschool facilities.** The best kind of job skill training is that provided on-the-job. Vocational education is too highly institutionalized in Utah. Within a few years, progress should be made to

provide "laboratory" space for at least 25 per cent of the training on employer (public or private) premises.

4. **Vocational education should be designed as a community concept.** Vocational counseling must be adequate. Local and area job markets, whether permanent or seasonal, must be fully known and analyzed. The economic community, both management and labor, must be known to the school and the school to it.

5. **No high school counselor should have a counseling load exceeding 300 students.** Vocational counseling is weak and one of the reasons is the high counselor-pupil ratio.

6. **At least two vocational courses as a prerequisite to high school graduation should be required.** This requirement should be met in Grades 10 and 11, and there should be five or six courses from which students may choose. One of the courses should deal with the general area of "the world of work" and the other with a manual, blue collar, or technical skill which may be selected. No young person should pass through the new American school without feeling some kinship for the value and importance of both work and jobs.

7. **Work-study programs should be organized in each high school for at least one year of the secondary school curriculum, preferably the 11th or 12th.** Not all areas will be easily adaptable to this recommendation, but no urban area should be without such a program—and the greatest amount of Utah population is concentrated in urban areas.

8. **Positive steps should be taken to serve the academic needs of students in the trade-tech schools.** No young person, with or without a high school diploma, can afford to consider himself ready for work with skill training only. For every 6 hours of job skill training, 2 hours of training should be required in any one or more of these areas: English, language arts, social science—especially economics and sociology—and the humanities.

9. **In districts that have at least 1,000 or more students in junior and senior high school enrollments, one full-time administrative officer should be assigned to coordinate the vocational-academic curriculums, probably by state mandate and at state expense.** As is true in most parts of the nation, Utah's academic and vocational programs are badly in need of integration rather than separation at the school district level.

10. **All vocational teachers should be placed on an eleven-months school year.** This arrangement should be made, even if classes are not in operation during this entire time, and one month's vacation time should be allowed.

CHAPTER 11

VIEWS OF MANAGEMENT

In the study of Vocational Education in Utah the views of management form an important part. To obtain a reasonable perspective of these views presents the problem of obtaining a representative sample of opinion. To meet this problem, Chamber of Commerce executives throughout Utah were invited to assist. As a result, they prepared lists of names—with titles and mailing addresses—of individuals who hire for various employers in their localities. The Chamber executives were advised to consider seven areas: wholesale and retail trade; manufacturing; service (including tourism); transportation and public utilities; contract construction; finance, insurance, and real estate; and mining.

The response of the Chamber executives was immediate and emphatic. Lists of individuals to be contacted were supplied. To these was sent a questionnaire form: *Business Evaluation of Vocational Education in Utah.* Sent out with the form was a cover letter which stated that specific remarks of any one employer would be confidential. Those completing the form were urged to give their "honest and forthright evaluation of the vocational training programs presently operating in your community." Also, they were encouraged to report only on their local branch if their company had offices in several cities in Utah.

After the first returns were received, the survey staff member followed up the mail approach with many on-the-spot interviews from Salt Lake City to St. George. Only the extreme eastern portion was not covered; however, business leaders in Vernal, Roosevelt, and Price did submit their views.

PARTICIPATING FIRMS

Management opinion was recorded from 25 Utah cities, as follows:

American Fork
Bountiful
Brigham City
Centerville
Clearfield
Hurricane
Hyrum
Kaysville
Layton
Logan
Ogden
Orem
Price
Provo
Redmond
Richfield
Richmond
Roosevelt

Roy
Salina
Salt Lake City
St. George
Springville
Tooele
Vernal

Views expressed in this study are based on remarks of 132 individuals "who do the hiring" for firms in 25 cities, as noted above. Seventy-five of these are officers in their businesses; the 57 others are store managers, personnel directors, or are in other responsible positions. Business of all sizes was represented.

The median number of employees in the 132 firms reporting is 20. Total employees of all these firms is 12,327—an average of about 93 per firm. Twenty-two larger companies have from 150 to 1,820 employees. Twenty-two smaller ones have 5 or fewer; 3, one each.

Some businesses represented cover several areas—the reason for the total exceeding the number of participating firms:

Areas of Business	*Participants in Survey*
Wholesale and retail trade	53
Manufacturing	17
Service (including tourism)	18
Transportation and public utilities	16
Contract construction	15
Finance, insurance, and real estate	21
Mining	4

The composition of a work force depends on the type of work and the difficulty of the work assignments. The individual who knows these requirements best is the one who does the hiring. The survey form provided employers an opportunity to look at the total work force employed by their firm.

Profiles of Work Force and Requirements

A profile of the work force of the businesses participating in this study shows that skilled workers and master craftsmen have major roles to play. From the data in Table 18, it is easy to see why modern society should place proper emphasis on—and recognize the important roles of—skilled workers, craftsmen, and technicians. These all serve vital roles in technology. The data point out that business must have scientists, engineers, and highly trained managerial personnel—many college-trained. For each of these, however, there are many technicians and craftsmen needed to carry on work which is as important as that of the originator's. Men who build, test, try out, adjust, and repair the equipment are as vital in Utah's economy as the engineer and the scientist.

TABLE 18

NUMBER OF PERSONS EMPLOYED AND LEVEL OF TRAINING REQUIRED IN BUSINESS FIRMS RESPONDING TO QUESTIONNAIRE

Business Firm	*Number of Persons Employed*	*Per Cent of Employees in Following Categories:*				
		Unskilled	*Skilled but not Master Craftsman*	*Master Craftsman*	*Assistant to Highly Trained Professional*	*Management and Professional*
1	4	25			25	50
2	150	30	10		50	10
3	14		100			
4	14		100			
5	75	30	10	40	20	
6	9	50	30	20		
7	12		83			17
8	19	75	15			10
9	20	10	70	5	10	5
10	10	20	10	70		
11	200	15	60	10	10	5
12	19	80				20
13	50	32	36	22	4	6
14	25		75		15	10
15	3	33				67
16	55	30	30	20	16	4
17	150	10	60	30		
18	30		75	25		
19	12	10	50			40
20	13	16	60		16	8
21	55	55	40	1	2	2
22	397					
23	125	20	60	20		
24	38		50	50		
25	35	10	10	50	20	10
26	50	75	25			
27	10	10	50	40		

TABLE 18 (Continued)

Business Firm	*Number of Persons Employed*	*Per Cent of Employees in Following Categories:*				
		Unskilled	*Skilled but not Master Craftsman*	*Master Craftsman*	*Assistant to Highly Trained Professional*	*Management and Professional*
28	23	50	25	20		5
29	14	100				
30	80	90	4		6	
31	200	5	20	60	10	5
32	400	10	60	10	10	10
33	128	95				5
34	450	52	15	15	6	12
35	150	1	54	10	15	20
36	325	10	20	40	10	20
37	115	5	90			5
38	200	40	10	40	5	5
39	28		83		10	7
40	250	22	66	7	3	2
41	62		60		15	25
42	10	50	50			
43	14		15	85		
44	45	20	50	25	2	3
45	4		75	25		
46	11	25	60	15		
47	17	50	30	10	10	
48	16		60	7		33
49	3	34	66			
50	12	90	10			
51	90	10	20	40		30
52	10	10	20		50	20
53	350	2	85	4	4	5
54	4		100			
55	27		80			20
56	49	18	47	35		

TABLE 18 (Continued)

Business Firm	Number of Persons Employed	Per Cent of Employees in Following Categories: Unskilled	Skilled but not Master Craftsman	Master Craftsman	Assistant to Highly Trained Professional	Management and Professional
57	260	10	20	50	10	10
58	85	12	73	5	6	4
59	21		20	30	35	15
60	12		83	17		
61	5		40	20	40	
62	71	21	5	31	26	17
63	5		100			
64	111	12	63	22	2	1
65	20		50			50
66	20	30	55	5		10
67	4		100			
68	2			100		
69	9	60	40			
70	7	28	28	44		
71	7	70	20			10
72	3		100			
73	5	20	20	60		
74	5		100			
75	1		100			
76	9	33	33			34
77	1		100			
78	28		70	25	5	
79	3		66			34
80	12	20	60	20		
81	13	100				
82	5	100				
83	3	100				
84	28	75	15	10		
85	10	20	80			
86	35	75	10	10		5

TABLE 18 (Continued)

Business Firm	Number of Persons Employed	Per Cent of Employees in Following Categories: Unskilled	Skilled but not Master Craftsman	Master Craftsman	Assistant to Highly Trained Professional	Management and Professional
87	15	55	45			
88	8					
89	10	30	50	20		
90	1		100			
91	5			40	60	
92	250	50	50			
93	12	30	10	30	10	20
94	11		70		30	
95	115	90	10			
96	570	30	45	20		5
97	300	50	30	10		10
98	700	20	45	10	20	5
99	180					
100	85	4	90			6
101	35	15	33	30	15	7
102	875	89	10	1		
103	30	80	20			
104	4	25	75			
105	9		50			50
106	7	15		85		
107	200	20	55	10	10	5
108	800	10	80	10		
109	1,820		37	15	14	34
110	52	10	80	4	2	4
111	200	15	60	15		10
112	137	88		9	2	1
113	15		80	20		
114	30	97				3
115	18	80	20			

TABLE 18 (Continued)

Business Firm	Number of Persons Employed	Per Cent of Employees in Following Categories:				
		Unskilled	*Skilled but not Master Craftsman*	*Master Craftsman*	*Assistant to Highly Trained Professional*	*Management and Professional*
116	45	33	60		5	2
117	32	13	13	31	34	9
118	5	20	80			
119	27		100			
120	4			25		75
121	45	5	40	50		5
122	23	4	96			
123	8	64	12		12	12
124	13	8	40	36	8	8
125	12	40	60			
126	30	10	10	74	3	3
127	27	7	52	11	19	11
128	24	50		50		
129	11	10		90		
130	7	70	30			
131	29		92	4		4
132	10		20	60		20

The educational requirements for individuals seeking employment in the future followed a pattern. (See Table 18.) Of the 132 businesses reporting, 100 said they could *not* use individuals having less-than-high-school education. Most of the remaining 32 employers noted they could use only 5 to 20 per cent. The need for future employees with a general high-school education and those with specialized occupational training was well documented. Of the 132, 98 will need 70 per cent or more of their future employees with this type of background. Sixty of the 98 wish from 90 to 100 per cent of their new employees to have this type of education and training in the high school.

Forty-five businesses favor one to three years of post-high-school education and training. Mainly, this group wishes 10 to 30 per cent to have this background. The 53 firms requiring college-trained individuals were in the minority; in these cases, such needs did not exceed 10 per cent. (See Table 18 for details.)

This survey, as others, provides an overview; it does not give specific answers to local personnel problems. To know what specific action is preferable, one should know the situation locally—say, in Logan, Ogden, or Richfield. Many communities in the nation undertake local job-opportunity surveys.

AN EXEMPLARY LOCAL STUDY

Education leaders wish to prepare youth for the world of work and for maximum individual development. The question is: What is needed for this preparation? How may facts be obtained?

Facing this problem some years ago Pittsburgh, Pennsylvania, provided an excellent answer. A comprehensive survey of business was taken by the Greater Pittsburgh Chamber of Commerce, local employment office, and Pittsburgh School Board. Of firms originally contacted, 87 per cent responded. Spurring this study was a high unemployment rate locally, plus a realization that education strongly favored the academic/college preparatory programs. Selected findings were:

> To meet *current* industrial needs locally, 109 vocational programs were recommended—48 within high schools, and 61 to require post-high-school education.
>
> To meet future industrial needs locally, this breakdown was favored:

6 per cent less than high school education

14 per cent general high school education

23 per cent high school, including specialized training: clerical, business, distributive, occupational, and vocational

33 per cent one to three years of post-high-school study or training

24 per cent four years or more of college.

To meet the requirements of the future, the Pittsburgh consensus—based on the study—suggested training of students be about as follows:

20 per cent in occupational studies

20 per cent in vocational programs

20 per cent in pretechnical instruction

40 per cent in college preparatory studies.

At that time, less than 4 per cent of Pittsburgh's high school students were attending vocational classes—woefully short of current and future needs of local industry. Other needs for readjustment and counseling guidance were obvious. Pittsburgh is restructuring its educational programs, as a result of this survey. For instance, there is and will be much greater emphasis on education and training for vocations.

FACETS OF THE UTAH STUDY

What Pittsburgh has learned, Utah communities are learning or may learn: local study of industrial/business needs is an efficient aid to structuring local and state educational programming.

In the Utah state survey, management reports its belief that:

- Local high schools are training 50 per cent or more in college-preparatory courses (78 such answers).
- Only 20 to 30 per cent are being trained vocationally or for pre-apprenticeship.

Obviously, these questions will require careful scrutiny—for accuracy and for future community and state needs: Are too many students being prepared for college? Of these, how many actually will attend? Is their college preparation a business necessity or economically feasible? These are just some of the questions that must attend such a review of the survey opinion.

How does business currently rate preparation for work of new employees? Of the 132 responses, 3 reported Excellent; 43 Good; 45 Satisfactory; 37 Fair; 3 Poor; and 4 gave no opinion. Thus, 88 of the 132 rated their new employees as satisfactorily trained or better. An obvious corollary is: Where is training for work obtained? Many methods of training are used to develop skilled manpower.

How does business train its own employees? Survey reports noted that 126 utilized on-the-job training; 57, apprenticeship; 26, adult vocational training in public schools; and 7 each, correspondence education or adult training in private schools. As to availability of skilled manpower, 104 reported limited supply; 13 said aid was readily available; 15 reported unavailability.

What cooperation exists between employers and schools? The Utah survey results here are illuminating and disturbing: While 45 of the 132 respondees noted that they did discuss their manpower needs with school officials, 87 did not so certify. Some of the latter may have had unofficial or official (that is, school board) representation in education. However, only 4 reported firm members serving local school boards as members. To the question: Have school guidance counselors visited your business in the last two years?, 98 respondees said no and only 32 yes. Communication, obviously, is limited, fragmentary, or incomplete.

THE USES OF BUSINESS ADVISORY COMMITTEES

How may liaison between educational requirements and business needs be preserved? A good method is the use of business advisory committees. For example, Los Angeles Trade Technical College uses many such committees—to see that its programs keep pace with changing job requirements in California. In San Diego, 83 groups of businessmen actively are engaged in helping with such improvement; each man is an expert in his field—and knowledgeable about manpower needs of his industry. In Kenosha, Wisconsin, the School of Vocational, Technical, and Adult Education has an exemplary plan of cooperation of "town and gown."

Fortunately for Utahans, examples are not so far to seek: More than 200 advisors serve the Salt Lake City Trade Technical Institute. President J. O. Nelson says: "We consider advisory committees as vital to the operation and progress of our institution as the administration itself."

In essence, the really outstanding vocational schools all profit from use of businessmen on formal-informal advisory committees. Thus they learn of changes in business and business requirements among employees. Furthermore, schools of this temper warm the interest of businessmen; the latter form a waiting list—to welcome graduates of such schools to their places of business.

Liaison between business and education may be improved through direct business instruction participation in vocational schools The survey queried: How many in your business serve on advisory committees for vocational-technical courses offered in your schools? Of 132 respondees, only 28 replied affirmatively. Three of these had 3 individuals in this role. Only 41 of the 12,327 employees are presently serving on an advisory committee. Revealing also was this query: Would you support added state/local taxes to develop more-comprehensive vocational-technical training programs? Sixty-six said yes; 56, no; 10 were undecided. Why this number of "no" votes? Here were some of the reasons given:

"Since a high percentage of high school students do not go on to college or do not graduate from college, we feel present tax monies should be more equitably allocated to provide training, education, and preparation in all fields of endeavor."

"I am not convinced that sufficient funds are not available. Supervisory and administrative staffs seem to be enlarging disproportionately."

"Monies now available could be channeled to take care of needed classes."

"Utah spends enough for education, but vocational-technical training programs apparently aren't getting their share."

"I would if necessary. First, I want to be convinced we are getting all we can for our educational dollar."

"But would support re-allocating of existing funds to give impetus to this program."

Some reporting a "yes" vote to the query voiced reservations:

"If properly programmed, yes; if handled in the same manner as now, no."

"Only after the monies presently allocated for this purpose are being used to the maximum efficiency."

THE TAX DOLLAR AND EDUCATION

Numerous comments by Management were directed at high taxes at all levels: local, state, and federal. There were demands for efficiency, better uses of tax money. For efficiency, 64 respondents thought that junior college-trade technical education should be offered jointly. On the other hand, however, 57 were equally certain these training programs should not be combined. A cogent observation was this: "When this has been done in the past, vocational-technical education has become a stepchild of academic education—in a very real sense of funds allocation, curriculum development, school-community status, and so on."

Also revealing was another writer's comment: "With Utah's scattered population I think that any available facilities should be used to the utmost. By integrating technical schools with junior colleges, trainees have advantages of academic instruction—should time be available."

MANPOWER TRAINING—ITS NEEDS AND IMPLICATIONS

There is an urgent and increasing need in our swiftly changing economy for a new hard look at the whole problem of manpower training. Many firms that have reasonably sophisticated training programs will find it advisable to re-examine them with a view to expanding their effort and filling in the gaps where they exist. Many others that have only modest programs or that have not yet entered the training field would do well to investigate this problem and to make plans to undertake balanced and comprehensive training programs.

This is a matter that is engaging the attention of top management and training directors throughout the nation. But there is an inescapable need for more attention to it, and the need is growing. Many trade, professional, and business associations are assuming leadership roles in bringing about a better understanding of the problem on the part of their members and in urging action. In this case also, the responsibility and the urgency are certain to grow as modern technology expands.

Increased Training Activities Needed

From observations blended in the Utah and the U. S. Chambers of Commerce, it is clear that room exists for a considerable advance on the manpower training front. By way of example, some training directors have outstanding apprenticeship programs but have not worked with vocational-technical schools or utilized the advantages of work-study, or correspondence education. Others are utilizing vocational-technical school programs but have not undertaken apprenticeship programs. The situation today demands expansion of programs, the use of more techniques, and the development of balanced programs. Thus there is a job for all. And the job must be done.

It is essential that the work force be upgraded constantly so that employed persons can hold tomorrow's jobs. It is also necessary to train unemployed persons to become productive in modern business and industry, and to train youngsters entering the labor force to meet manpower demands so that there is no large pool of unemployables in the economy of tomorrow. This is essential if standards of living are to continue to improve, and if the United States is to continue to be competitive in world markets. And on these prospects hangs the position of our country in a highly competitive world, a world that is competitive in politics as well as in the area of trade.

Doubtless most people are aware by this time of the swift pace of the technological change and what it is doing to manpower demands. There is a lot of talk about automation, which is a rather imperfect word for the technological improvements that are taking place. There are complaints that automation is throwing people out of work. Not enough emphasis is placed on the new skills which are being created by technological improvements, and on the growing shortage of workers qualified to perform these skills. Actually, what now exists is a pool of unemployed persons who for the most part do not possess the skills required by industry, and a large demand by industry for people who have the required skills. It perhaps is true, as some have said, that a job could be available for every unemployed person if he only had the skill necessary to fill it.

The Challenge We Face

Here is the basis of the challenge that we face. We must modernize our work force, and see that the modernization process keeps pace with the sweep of technological change. The demand for blue-collar workers is declining. The age of the white-collar worker is here, and the shift from blue to white collars will increase hereafter. These white-collar workers must possess required skills to hold their jobs. The emphasis that must be placed on education and training springs from these inescapable facts of life.

To meet the challenge, there must be increasing cooperation and coordination of effort between businessmen and educators. They must learn to know each other's needs and problems at a level not yet reached in Utah, and work together to provide the trained manpower to fill the jobs of today and tomorrow.

The businessman has a special mission to perform in this process and a responsibility to carry it out. More than any other member of the community, he knows what the employment opportunities and requirements are and promise to be in a given industry or business. Therefore, he is in a unique position to keep the educator and the programs in touch with reality so far as demands for manpower are concerned.

Businessmen can be helpful by serving on advisory committees to make certain that school curricula are realistic and meaningful. They can assist also by lending top management people as teachers of subjects in their field of special knowledge, by encouraging the use of skilled craftsmen as teachers of certain vocational and technical courses, and by furnishing training equipment, or making it available. In these instances, businessmen will be performing community services of a type that is going to be needed more and more.

There is an increasing need for vocational and technical training schools, and for businessmen to act in an advisory capacity to see that their training courses keep abreast of actual needs. Such schools offer a highly encouraging solution for the school dropout problem, as evidenced by the low dropout rate in some areas where successful vocational and technical schools are in operation. In numerous cases, they have given the dropout a new goal to shoot for, and an opportunity to become a productive and prosperous citizen. They are also supplying industry with skilled manpower to fill the jobs of the present era. Business participation is probably the most important factor in these problems. All the money that is spent on vocational training in many areas might well be wasted unless business becomes deeply involved in these programs.

Each citizen of Utah, be he a representative of management, labor, government, or lay group, should accept this challenge—*measure the vocational technical programs offered youth and adults in your community or area.* Are *you* doing as much as our society needs? Can you afford to do less?

UTAH MANAGEMENT SPEAKS

What are the views of management on how Utah vocational-technical training programs may be made more effective? Representative responses from the survey are quoted to provide answers to this question:

- Better instruction and coordination with industry.
- Assist administrators, teachers, students, and parents to become aware that high schools should be vocational and technically oriented as well as college preparatory oriented.
- By offering advanced training during off hours.
- In our particular area, I believe the vocational and technical training programs need to be expanded and geared to the needs of the area. For instance we need plumbers, electricians, and general handymen.
- Duchesne County needs to offer more adult education classes geared to the needs of the communities and not merely to enable teachers to satisfy requirements for certification.
- Greater concern for industrial needs and close working cooperation to fill these needs.
- Establishment of a trade-tech school at the southern end of the state.
- Increased emphasis on vocational education by faculty and school administrators.
- By having vocational training programs in more areas of the state than just Provo and Salt Lake.
- Broadening industrial arts offerings—at the high school level. These make an excellent matrix, and provide a vestibule into more specialized and advanced vocational-technical training.
- To the extent that budgets permit, more closely simulating "real world" situations, e.g., introducing machinist trainees to tape control machine tools, draftsman to

mechanized drawing and latest commercial and military specifications, etc.

- More emphasis on programs similar to DECA [Distribution-Marketing-Selling] and less emphasis on training for professional fields and more consideration for training for service professions and blue-collar jobs.
- Instructors should have direct experience in the field they are teaching! (e.g., an experienced mechanic should teach mechanics, etc.).
- We do not have a bona fide high school vocational program. We need a department which leans heavily on vocational training with some academic.
- We need a post-secondary school in this area which is equipped and staffed to provide vocational training necessary for local industry.
- Expand the present program to include vocational and technical training not now covered. Some of these training programs could be integrated with classes now offered in high school.
- If our local administrators of the vocational schools would make a survey of the needs of industry and business in the area and then train the untrained, semiskilled, and skilled to fit the particular jobs needed, we would have better help and our school dollars would go to a more meaningful purpose.
- Two periods per day of training at the job of private industry. Perhaps supplemented by high school instruction.
- Better communication with business establishments.
- By closer correlation with vocational schools, enabling released time in high school to participate in the vocational training where they are staffed and equipped to handle those phases that are not available in high school.
- Field trips to industrial firms.
- Coordinate classes offered and content of class material with future industrial needs.
- More complete and comprehensive plan on high school level—not just general classes.
- Better vocational guidance and counseling to direct young people into needed fields of their adaptability.
- Offer courses that are required in the area, supervised by, or assisted by industry.

- At the high school level, concentrate on the vocational or technical training more completely without the needs for subjects which do not apply or for which the person has no desire or need.
- Conduct a more effective advertising program in the area to make established workers aware of vocational and technical courses offered. Work through mailing, newspapers, trade magazines, and local industry to accomplish this.

MAJOR RECOMMENDATIONS

1. **Manpower training programs should be re-examined.** In a swiftly changing economy, it is becoming imperative that training programs be studied to determine effectiveness and to point up needs. New skills are being created by technological advances and the shortage of workers qualified to perform these skills is increasing. Manpower must be trained to fill the jobs that are developing in the economy if standards of living are to continue to improve and if the United States is to continue to be competitive in world markets.

2. **There must be increasing cooperation and coordination of effort between businessmen and educators to meet the challenge of providing trained manpower to fill the jobs of today and tomorrow.** Businessmen can help by serving on advisory committees to make certain that school curricula are meaningful. They can assist also by lending top management people as teachers of subjects in their field of special knowledge, by encouraging the use of skilled craftsmen as teachers of certain vocational and technical courses, and by furnishing training equipment.

3. **More vocational and technical schools should be established to meet increasing needs.** These schools offer a highly encouraging solution for the dropout problem, as evidenced by the low dropout rate in some areas where successful vocational and technical schools are in operation. In addition, they supply industry with skilled manpower to fill the jobs of the present era.

4. **Modern society should place proper emphasis on the important roles of skilled workers, craftsmen, and technicians.** These all serve vital roles in technology. Men who build, test, try out, adjust, and repair the equipment are as vital in Utah's economy as the engineer and the scientist.

PART IV—ANCILLARY SERVICES

- Personnel
- Finance
- Plant Facilities

CHAPTER 12

TEACHER PERSONNEL

No school program can be better than the quality of its teachers. An adequate supply of competent, dedicated teachers is essential to the success of any educational endeavor. All other functions, regardless of their importance, occupy supporting roles to the teaching-learning process, in which the teacher is the leading key figure.

This chapter deals with the qualifications of vocational education teachers in Utah, the processes by which they are trained, and provisions for their welfare.

COMPOSITION OF TEACHING STAFF

More than 1,400 persons, including 390 guidance counselors, were engaged as teachers of vocational subjects in Utah high schools during the school year 1965-66. An additional 271 teachers were employed in post-secondary day and evening programs in trade and technical education, and 321 persons participated as teachers in other adult education programs. Except for home economics, most of the nontechnical adult education programs were staffed by regular high school teachers. Table 19 shows the distribution of vocational education personnel by level and by subject area.

In some instances—particularly involving high school trade and industrial training—teachers were assigned to more than one subject area. For example, all except 23 of the 119 high school teachers of trade and industrial training also taught industrial arts. A similar situation existed in the business and distributive education areas, although on a smaller scale. Such overlapping assignments frequently were necessary in schools in which enrollments were too small to justify a separate full-time instructor in each area.

PROFESSIONAL QUALIFICATIONS

Teacher competence is determined by many factors, some of which are aesthetic and difficult to measure. It is generally accepted, however, that criteria such as level of professional training, amount and nature of experience, and extent of adherence to prescribed certification standards provide a basis for a reasonable appraisal of staff competence. These factors are used as evaluative criteria in this section of the report.

Data concerning each comparative factor were not available for every vocational teacher, hence the discrepancy which the careful reader will note between numerical totals indicated in Table 19 and those in subsequent tables. The discrepancy is slight, however, and should in no way detract from the validity of trends revealed by the available data.

TABLE 19

DISTRIBUTION OF UTAH VOCATIONAL EDUCATION TEACHERS, 1965-66

Position	*Number*	
Secondary		
Agriculture	56	
Distributive Education	33	(includes 11 who also teach Office Occupations
Guidance Counselors	390	
Home Economics	302	
Industrial Arts	348	(includes 96 who also teach Trade and Industrial Training)
Office Occupations	288	(includes 11 who also teach Distributive Education)
Trade and Industrial Training	119	(includes 96 who also teach Industrial Arts)
Post-Secondary		
Trades and Technical Education		
Day Instructors	174	(includes 56 who also teach evenings)
Evening Instructors	153	(includes 56 who also teach days)
Adult (Nontechnical)		
Agriculture	42	
Distributive Education	11	('64-'65)
Home Economics	215	('64-'65)
Trade and Industrial Training	53	

Source: Directories of Utah Vocational Education Personnel, 1965-66.

College Training

The baccalaureate degree is recognized as the minimum educational level necessary for teachers of all academic subjects and many vocational areas, including agriculture, home economics, industrial arts, and distributive and office occupations. The most notable exception to this requirement is the area of trade and industrial education, teachers of which frequently are recruited into the teaching profession from the skilled trades with credit given on the basis of occupational skills in lieu of academic courses.

The situation in Utah represents a departure from the general rule in that the overwhelming majority of trade and industrial education teachers have completed college. Since most of these teachers also teach industrial arts, and thus are required to have a college degree, the situation is not surprising. Nonetheless, this is a commendable standing.

Table 20 shows the educational levels of all vocational education teachers in Utah secondary schools for whom these data were available, classified by major and minor assignments in the various subject areas. Ninety-nine per cent hold the bachelor's or higher degree. This proportion is approximately equal to the percentage of all Utah secondary school teachers holding at least the bachelor's degree, and exceeds slightly the percentage of elementary and secondary teachers combined who hold the bachelor's or higher degree. (See *Status of Teacher Personnel in Utah*, 1965-66, pp. 16-17.) The relative position of vocational teachers as compared with other Utah teachers is even more favorable on the basis of the master's degree. Approximately 19 per cent hold the master's or higher degree, whereas only 11 per cent of all Utah elementary and secondary teachers are in this category. Fifty per cent of the vocational teachers have earned at least 45 quarter hours of college credit beyond the bachelor's degree level, as compared with 36 per cent of the combined elementary and secondary school teaching staffs. These data substantiate the conclusion that vocational teachers in Utah secondary schools have consistently higher levels of college training than do other Utah teachers.

On the basis of national comparisons, Utah's relative standing in terms of graduate degrees is less favorable. The national average for secondary school teachers holding the master's or higher degree is 35 per cent;[1] Utah's proportions are 19 per cent for vocational teachers and 17 per cent for all secondary teachers. Excluding guidance counselors, only 11 per cent of the vocational teachers hold the master's or higher degree. While graduate training is not a paramount necessity in certain vocational areas, such training undoubtedly contributes to increased competence and therefore is to be desired. Utah's teachers as a whole have a long way to go in this regard. Efforts should be made as a state policy to encourage more teachers to pursue graduate degrees. The provision of

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[1] NEA Res. Bul. Vol. 44, No. 2, May 1966, p. 35.

TABLE 20

College Preparation of Utah Secondary School Vocational Education Teachers, 1965-66

Assignment		*Less than Bachelor's Degree*		*Bachelor's Degree*		*Master's or Higher Degree*		*Total*	
		Number	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
Agriculture	Major Assignment			34	83.0	7	17.0	41	100.0
	Minor Assignment			4	57.1	3	42.9	7	100.0
Distributive Education	Major Assignment			5	83.3	1	16.7	6	100.0
	Minor Assignment			4	50.0	4	50.0	8	100.0
Guidance	Major Assignment			139	51.7	130	48.3	269	100.0
	Minor Assignment			8	66.7	4	33.3	12	100.0
Home Economics	Major Assignment	1	0.4	268	97.8	5	1.8	274	100.0
	Minor Assignment			6	85.7	1	14.3	7	100.0
Industrial Arts	Major Assignment	8	2.5	265	82.0	50	15.5	323	100.0
	Minor Assignment			17	94.4	1	5.6	18	100.0
Office Occupations	Major Assignment	1	0.4	217	88.6	27	11.0	245	100.0
	Minor Assignment			39	86.7	6	13.3	45	100.0
Trades and Industrial Training	Major Assignment	2	25.0	6	75.0				
	Minor Assignment							8	100.0
Total		12	1.0	1,012	80.1	239	18.9	1,263	100.0

Source: Division of Teacher Personnel.

more attractive salary levels for master's degree holders should serve as an incentive.

The following breakdown summarizes the average educational preparation of the supervisors and staffs in the various post-secondary trades and technical education programs. A more detailed assessment of staff competence in this area is provided in Chapter 1 of this report.

Institution	*Average Educational Level*
Utah State University	
Trade and Industrial Education Supervisors and staff	Master's degree plus one year post M.S.
Junior colleges and colleges	
Vocational supervisors	Master's degree
Staff	Bachelor's degree
Technical Institutes	
Administration	Bachelor's degree plus one year of graduate study
Staff	High school plus 3 years college

Experience

Research has not validated a specific amount of teaching experience as optimal. Individual teachers vary in the extent to which they improve or retrogress with additional experience. It is probable that teaching skill is improved by experience in direct proportion to the quality of inservice training provided. In the interest of increased efficiency, a satisfactory balance between experienced and inexperienced staff members should be maintained.

Secondary school vocational education teachers in Utah have a median of 7.44 years of teaching experience as compared with a median of 6.37 years for all Utah secondary school teachers. Eight per cent are beginning teachers, and 41 per cent have taught 5 or fewer years. Approximately 36 per cent have more than 10 years experience, and 15 per cent have taught 21 or more years. Overall, the staff appears to be satisfactorily balanced in teaching experience. Table 21 presents data by which comparisons may be made among teachers of the various vocational subject areas.

Trade experience as well as teaching experience is important in some vocational areas, particularly trades and industrial

TABLE 21
Teaching Experience of Utah Secondary School Vocational Education Teachers, 1965-66

Assignment	*No prior Experience*		*1-5 yrs.*		*6-10 yrs.*		*11-15 yrs.*		*16-20 yrs.*		*21-25 yrs.*		*26 or more*		*Total*	
	No.	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Agriculture			17	35.4	10	20.8	8	16.7	8	16.7	4	8.3	1	2.1	48	100.0
Distributive Education	3	21.4	3	21.4	3	21.4	1	7.1	2	14.3	1	7.2	1	7.2	14	100.0
Guidance	1	0.4	45	16.0	70	24.9	56	19.9	35	12.5	20	7.1	54	19.2	281	100.0
Home Economics	42	15.0	115	40.9	45	16.0	28	10.0	20	7.1	13	4.6	18	6.4	281	100.0
Industrial Arts	19	5.6	125	36.6	100	29.3	48	14.1	23	6.7	7	2.1	19	5.6	341	100.0
Office Occupations	30	10.4	119	41.0	51	17.6	25	8.6	13	4.5	14	4.8	38	13.1	290	100.0
Trade and Industrial Training	1	12.5	3	37.5	2	25.0			1	12.5	1	12.5			8	100.0
Total	96	7.6	427	33.8	281	22.2	166	13.1	102	8.1	60	4.8	131	10.4	1,263	100.0

Median = 7.4 years.

Source: Division of Teacher Personnel.

and technical training. A minimum of 6 years of trade experience is required for teachers of these areas. Both trade and teaching experience of instructors in post-secondary vocational programs are summarized as follows:

Institution	*Average Years of Teaching Experience*	*Average Years of Trade Experience*
Utah State University		
Trade and Industrial Education Supervisors and staff	12.0	6.5
Colleges and Junior Colleges		
Vocational supervisors	19.0	10.0
Staff	9.6	9.0
Technical Institutes	8.6	9.1

Certification

Present Utah certification standards provide for 12 different types of certificates and 15 endorsements. Certificates are required of all public school teachers, administrators, and supervisors in kindergarten through Grade 12, and of non-teaching professional personnel such as counselors, librarians, and school social workers. Temporary permits called "letters of authorization," valid for one year, are issued in emergency situations to individuals who are unable to meet certification requirements. Persons so authorized comprised 1 per cent of the total statewide staff during 1965-66.

The General Secondary Certificate is the basic credential issued to high school teachers in Utah. This is a "blanket," unendorsed certificate and authorizes the holder to teach high school subjects at the discretion of local authorities. Special certificates are issued in the areas of agriculture, home economics, industrial arts, and trades and industrial training. Although teachers of agriculture, home economics, and industrial arts may teach up to 50 per cent of their time under provisions of the General Secondary Certificate, the Board of Public Instruction strongly urges compliance with the requirements for the special area certificates. Guidance counselors may secure the Pupil Personnel Certificate with endorsement as counselor. Teachers of distributive education and office occupations come under provisions of the General Secondary Certificate.

All of the above certificates require the bachelor's degree except the Trade and Industrial Education Certificate. This certificate is issued in two types: (1) provisional, based upon high school graduation or approved equivalent and 6 years of trade experience; and (2) regular five-year certificate, based upon completion of 45 quarter hours of prescribed college credit and a minimum of 2 years of successful teaching experience. Current requirements stipulate that every teacher of trade and industrial education must hold the five-year certificate before beginning his eleventh year of service.

Teachers in adult vocational programs are not required to be certificated. Until recently a special certificate was issued to teachers of adult education; however, this practice has been discontinued. The only state-specified requirements for teachers of adult programs are three years of trade experience and the recommendation of the local district superintendent. Six years of trade experience are required for teachers of post-secondary trades and technical education.

Ninety-nine per cent of the vocational education teachers in Utah high schools during 1965-66 possessed valid certificates; the remaining 1 per cent taught under emergency authorization. Approximately one-half of 1 per cent held life diplomas, a credential which wisely is no longer issued in Utah. These statistics on substandard certification are identical with those of the total statewide staff and are commendably low.

Utah certification standards were in the process of being revised when field work for this study was conducted. Two types of certificates are contemplated: (1) basic professional, based on completion of an approved bachelor's degree program; and (2) professional, based on completion of an approved master's degree program or 55 quarter hours of approved graduate credit. Requirements for administrative and subject area endorsements are being developed, which represents a departure from the "blanket certificate" concept. The survey staff concurs in this forward step and suggests that careful attention be given the process of determing subject matter and—where appropriate—trade experience requirements for subject area endorsement. Certification of teachers is an important state function and extreme diligence should be exercised in the development of criteria.

TEACHER SUPPLY AND DEMAND

The supply of teachers for Utah public schools is measured primarily by the number of candidates graduated from the teacher-training institutions within the state. Utah institutions furnished nearly 80 per cent of the new teachers employed in

Utah during 1965. A considerable number of potential teachers come to Utah teacher-training institutions from other states probably because of religion. For example, more than 36 per cent of the teaching candidates who graduated in 1965 from Utah institutions came from outside the state.

Demand for teachers is influenced by three factors: (1) the number of teachers who discontinue teaching; (2) the number of additional positions created by increased enrollments; and (3) the number of teachers needed to reduce teacher load and/or provide for expanded programs. The latter factor is more pertinent to the vocational education staff.

According to the state specialists in trade and industrial education and distributive education, qualified teachers in these areas are in short supply. The situation appears particularly acute in the area of distributive education. Eight new DE programs are contemplated for next year, and vacancies are anticipated in 3 of the 33 programs currently in operation. Positive steps should be taken aggressively to recruit more prospective teachers into training programs in areas of existing shortage. Conversely, there is generally an excess of teachers trained in home economics, agriculture, and industrial arts, with the result that many of these teachers accept employment in other states. Improved guidance in higher education should help to solve this problem. The following statistics illustrate this condition:

Teaching Field	*Per Cent Teaching Outside of Utah**
Agriculture	80.0
Home Economics	31.0
Industrial Arts	48.0

*Based on graduates of Utah institutions between 9/1/64 and 8/31/65.

Teacher turnover for the state as a whole is relatively low —slightly less than 9 per cent in 1965 and averaging 9.8 per cent for the past 5 years. For vocational education teachers, annual turnover ranges from an estimated low of 5 per cent for teachers of agriculture and industrial arts to a high of 20-25 per cent for home economics teachers. Primary factors contributing to the latter condition are increased home responsibilities and rearing children. In comparison with turnover rates for home economics teachers elsewhere, this rate is not considered excessive.

As suggested earlier, the religious factor has served as a strong inducement for many teachers to come to and to remain in Utah. The state is uniquely fortunate in this respect. For example, teachers of trades and technical education could in many instances earn higher salaries in industries outside the state. Most prefer to remain in Utah and accept lower salaries.

Recruitment and selection of vocational education teachers is the responsibility of local school district officials. State specialists have a very real leadership responsibility, however, for they maintain an awareness of local needs and the supply of teachers being prepared within their respective areas, and should be prepared to provide consultative assistance in the placement process. However, the selection and appointment functions appropriately reside at local levels.

TEACHER EDUCATION

The professional preparation of teachers includes both preservice and inservice education. The greater the number of years of study in a comprehensively planned program, the greater the likelihood that the person possesses sufficient education for quality performance in teaching. But in teaching, as in all the major professions, continued inservice study and development are necessary to maintain proficiency.

Preservice Education

Utah has 6 teacher training institutions, which graduated a total of 2,209 teacher candidates in 1965 and an estimated 2,519 in 1966. As is true in most states, the state land-grant college (Utah State University) provides most of the training for vocational education teachers. The University of Utah and Brigham Young University also offer vocational teacher training programs, primarily in the areas of office occupations, home economics, industrial arts (at Brigham Young University), and guidance. The College of Southern Utah, a branch of Utah State University, was recently granted approval of a teacher education program in industrial arts. Table 22 shows a breakdown of vocational teacher education programs available in Utah institutions.

The State Board for Vocational Education assumes responsibility for designating the institutions that provide training for vocational education teachers. The unique function of Utah State University as an institution for training teachers of all vocational areas is spelled out in state statutes. In other insti-

TABLE 22

TEACHER EDUCATION PROGRAMS OFFERED AT UTAH TEACHER TRAINING INSTITUTIONS

	Subject						
Institutions	*Agriculture*	*Business Education*	*Distributive Education*	*Home Economics*	*Industrial Arts*	*Trades and Industrial T.*	*Guidance*
Utah State	x	x	x	x	x	x	x
University of Utah		x	x	x			x
Brigham Young University		x		x	x		x
College of Southern Utah*		x			x		

* Newly-approved program.
Source: Division of Teacher Personnel.

tutions, it appears that decisions concerning the inauguration of additional vocational teacher education programs are reached cooperatively by state department and institutional personnel. The present imbalance in supply and demand of vocational teachers suggests the need for coordination of the state's role and constant attention to the numbers of teachers being trained in the various vocational areas. State authorities should strive to maintain a proper balance between the number trained and the number needed, particularly with reference to areas of shortage. The state institutions should be especially cooperative because of their tax-supported state service roles.

Approval of institutional teacher training programs is a state responsibility. In Utah, the program of state approval includes the following elements:

1. Formal evaluations and recommendations therefrom will be made every five years for those institutions already approved.
2. New programs being considered for the first time must be formally approved by the State Board of Education before candidates completing the programs will be granted certificates.
3. Criteria to be used in formal evaluations will be determined cooperatively by those concerned under the leadership of the State School Office staff.
4. Team members assigned to carry out evaluations will proceed under the direction of the Administrator of the Division of Teacher Personnel and will be drawn from the State School Office staff, other colleges and universities, and local school districts.[2]

Institutional accreditation frequently is accomplished cooperatively in connection with NCATE and/or Northwest Association evaluations. In these instances the state education department staff normally is represented on visiting teams. These practices are satisfactory in that they provide added evidence of quality in teacher education programs. They should not, however, lead to the restriction of all formal evaluation of teacher training programs only to those conducted under auspices of NCATE or the regional accrediting association. The state has a responsibility in this function that should not be delegated, relinquished, or minimized. Periodic evaluations of teacher education programs should be conducted systematically by state department representatives, including persons from the vocational education staff when appropriate, sufficiently often to assure maintenance of high standards of program quality. Evaluations by other accrediting organizations should be considered supplementary to the basic state program. Evaluative criteria should be cooperatively developed, utilizing state department personnel, representatives of teacher training institutions, local school leaders, and other appropriate resources.

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[2] Certification Requirements in Utah Public Schools, pp. 8-9 (adopted by Utah State Board of Education June 14, 1965).

All vocational teacher education programs need provisions for frequent review, upgrading, and redirection. Although each occupational category has its own specific problems, effective teacher education is a major element in vocational education and should not become static and routine. In-depth analyses of teacher education in each vocational area are found in the individual subject area chapters of this report.

Inservice Training and Supervision

Supervision and inservice, or on-the-job education of vocational education teachers in Utah, are coordinated at the state level by the specialist in each vocational subject area. Twenty-seven of the 40 local school districts have directors of vocational education, whose responsibilities include assistance in the provision of local inservice and supervisory activities. Teacher trainers are provided by the three major vocational teacher training institutions, as follows: agriculture 2; distributive education 1; home economics 6; trades and industrial and technical education 1. The latter position is divided in assignment between the fields of trade and industrial training and trades and technical education. An additional teacher trainer is needed for these areas, which would make it possible for each field to have the services of at least one teacher trainer.

The necessity for upgrading the competence of teachers by inservice education appears to be recognized by state leaders in vocational education. Many activities are provided, and more are contemplated for future programs. The following activities are representative of those provided during 1965-66: summer workshops, periodic after-school and Saturday workshops during the academic year; institutional residence and extension courses; regional conferences; and annual conventions.

Supervision of vocational education programs is accomplished through the efforts of the state specialists, teacher trainers, and local directors of vocational education. State specialists devote a portion of their time to school visitation, although their major supervisory function is that of coordinating the program within their respective areas. Teacher trainers represent the primary source of on-the-job assistance to teachers. In addition to visitation, the activities of teacher trainers include planning for workshops and conferences, conducting classes, publishing newsletters or other materials, assisting with the preparation of curriculum guides, and such other functions as may be agreed upon by state department and institution representatives.

The state staff should continue to work toward the expansion and improvement of inservice and supervisory programs. Although basic provisions appear satisfactory, an ongoing program demands more attention to long-range program planning. Additional state level personnel are needed in certain areas, as recommended elsewhere in this report, in order that supervisory services may be expanded. Other recommendations pertinent to specific areas are contained in appropriate chapters of the report.

TEACHER ASSIGNMENT AND LOAD

An analysis was made of the teaching assignments of Utah vocational education teachers in relation to their college majors and minors. Table 23 shows the number and percentage of teachers who had no college major or minor in the vocational subject which they taught as a major or minor assignment during 1965-66.

TABLE 23

NUMBER AND PER CENT OF TEACHERS WITHOUT MAJOR OR MINOR IN THEIR TEACHING ASSIGNMENT

	Major Assignment		*Minor Assignment*		*Total*	
Assignment	*Number*	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
Agriculture	3	7.0	1	14.0	4	8.0
Distributive Education	4	67.0	8	100.0	12	86.0
Home Economics	11	4.0	5	71.0	16	6.0
Industrial Arts	22	7.0	10	56.0	32	9.0
Office Occupations	15	6.0	24	53.0	39	13.0
Trade and Industrial Training	1	13.0			1	13.0

Except for distributive education, the proportion of teaching assignments outside of college major and minor areas is not excessive. One explanation for the high percentage in the case of distributive education is the possibility that many of these teachers were trained in the broad realms of business and office occupations instead of within the specific area of distributive education. Current Utah certification standards do not require a separate certificate or endorsement for distributive education, but there has been encouragement for college specialization in this area.

A considerable disparity in daily pupil load exists among teachers of vocational education. Variation in the extent and nature of required classroom supervision accounts for much of this difference. Teachers of office occupations have the heaviest numerical loads. Sixty per cent of the teachers in this category have daily pupil loads of 150 or more pupils, and 18 per cent reported loads in excess of 200 pupils. These proportions—particularly the latter—are too large for maximum efficiency. In contrast, 69 per cent of the agriculture teachers and 75 per cent of the teachers of trades and industrial training teach fewer than 130 pupils daily. Sixty-two per cent of the teachers of industrial arts and home economics have daily pupil loads within the 100-149 pupil range. Percentages above and below this range are 22 and 16, respectively, for both home economics and industrial arts teachers.

Although teaching assignments are made at local district levels, appropriate recognition by state leaders should be given the importance of reasonable and equitable work loads. State guidelines for vocational education suggest that shop and lab classes not exceed 21 pupils and that classes in certain other vocational areas (e.g., distributive education) not exceed 27 pupils. Conscientious adherence to these criteria should result in more reasonable daily pupil loads than many of those reported during 1965-66.

TEACHER WELFARE

Programs relating to various aspects of teacher welfare do not distinguish between vocational education teachers and other teachers. Except for the statewide retirement program, employee benefits are determined locally and vary among systems. The status of these items will be discussed in this section of the report.

Salaries

Funds for Utah teachers' salaries are included in the total allocation of foundation program funds to local districts, in terms of distribution units based on ADA. Local districts develop their own salary schedules. In 1965-66 beginning salaries for bachelor's degree teachers ranged from $4,500 to $5,400 and averaged $4,701. Maximum salaries for holders of master's degrees ranged from $6,978 to $8,400 with an average of $7,521.

Salaries of vocational education teachers were higher than those of other teachers because of additional distribution units allocated for vocational programs under the state minimum foundation program. Vocational education teachers were paid an estimated average of $6,548 during 1965-66, as compared with the statewide averages of $6,161 for all secondary school teachers and $6,250 for all classroom teachers. Estimated 1965-66 national averages for teachers in the last two categories are $6,768 and $6,506, respectively.

Table 24 shows the distribution of vocational education teachers on the basis of salaries received during 1965-66. Overall totals indicate a uniform distribution throughout the range of $4,500-$8,000. Fifteen per cent were below $5,000 and 14 per cent were $8,000 or higher. Fifty per cent of the teachers received $6,500 or more, as compared with national and state averages for this level of 41.3 per cent and 42.1 per cent respectively. Salaries of guidance counselors were consistently higher than those of other teachers, undoubtedly a result of the larger proportion of graduate degrees earned by this group. Home economics teachers as a whole received lower salaries than teachers of other subjects, probably because of the relatively high percentage of inexperienced teachers in this category.

As a whole, teacher salaries in Utah are lower than those of teachers in the majority of adjoining states. Only Wyoming and Idaho paid lower average salaries in 1965-66 than did Utah. Average salaries paid teachers in the other neighboring states during 1965-66 are as follows: Colorado, $6,387; New Mexico, $6,415; Nevada, $6,900; and Arizona, $6,960. Utah's average of $6,250 places the state in a relatively unfavorable position in the competition for superior teachers. Although turnover in Utah is not a pressing problem, more attractive salary provisions would serve to strengthen the state in its efforts to recruit and retain the best possible instructional staff. A commanding salary scale is essential if a state expects to compete for superior teachers in an open market. Otherwise, recruiters can only take whoever is left.

TABLE 24

SALARIES OF UTAH VOCATIONAL EDUCATION TEACHERS, 1965-66

	Agriculture		*Distributive Education*		*Guidance*		*Home Economics*		*Industrial Arts*		*Office Occupations*		*T and I Training*		*Total*	
Salary Range	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*	*No.*	*Per Cent*
Below $4,500	3	6.0					7	2.0			2	1.0	1	13.0	13	1.0
$4,500-4,999			1	7.0			75	27.0	28	8.0	65	22.0	1	13.0	170	14.0
$5,000-5,499			2	14.0	6	2.0	62	22.0	45	13.0	42	14.0			157	13.0
$5,500-5,999	2	5.0	2	14.0	15	5.0	28	10.0	45	13.0	35	12.0			127	10.0
$6,000-6,499	7	15.0	2	14.0	25	9.0	25	9.0	58	17.0	38	13.0	2	25.0	157	12.0
$6,500-6,999	9	19.0	2	14.0	24	9.0	22	8.0	42	12.0	34	12.0	3	37.0	136	11.0
$7,000-7,499	4	8.0			42	15.0	29	10.0	65	19.0	27	9.0			167	13.0
$7,500-7,999	12	25.0	3	22.0	42	15.0	32	11.0	36	11.0	29	10.0			154	12.0
$8,000-8,499	4	8.0			62	22.0			18	5.0	16	5.0			100	8.0
$8,500-8,999	3	6.0	2	15.0	55	20.0	1	1.0	3	1.0	1	1.0	1	12.0	66	5.0
$9,000 and above	4	8.0			10	3.0			1	1.0	1	1.0			16	1.0
Total	48	100.0	14	100.0	281	100.0	281	100.0	341	100.0	290	100.0	8	100.0	1,263	100.0

Estimated Average = $6,548.

Source: Division of Teacher Personnel.

Tenure

Utah is one of 13 states which have no tenure law. Utah statutes authorize local school boards to enter into written contracts for the employment of personnel for terms of up to 5 years, with the provision that local boards may terminate the contract for cause. Although not a legal requirement, the commonly accepted practice among local districts is to notify teachers in writing by April 1 if they are not to be re-employed for the following school year. The Utah Education Association has developed an "orderly dismissal procedure," under terms of which the teacher may request a hearing and receive legal assistance and representation from the association.

Teachers need the employment security afforded either by tenure or by automatic continuing contracts. At the same time, school systems need a legal procedure without undue encumberances for dismissing teachers who are professionally incompetent or whose conduct is inimical to the best interests of children and youth. For these basic reasons, immediate consideration should be given the enactment of appropriate legislation to secure these mutual benefits for teachers and school systems in Utah.

Retirement

Utah teachers participate in the Utah School Employees Retirement System, membership in which is mandatory for all full-time school employees. Social security coverage also is available. The retirement plan does not permit the purchase of credit for out-of-state service, even for states with reciprocity programs. This is a deterrent to recruiting out-of-state experienced teachers.

The plan is based on a 4 per cent employee contribution rate for up to $4,800 in salary, or a maximum of $192 annually. Employers pay 3.5 per cent. At retirement, members may select one each of four basic and two supplemental options governing disbursement of allowances, including death benefits. Disability benefits are available after 10 years of creditable service.

Age 65 is the normal retirement age. Retirement benefits are reduced approximately 6 per cent for each year of retirement prior to age 65. Members may retire at age 55-59 with 30 years of service, age 60-64 with 20 years, age 65-69 with 10 years, or age 70 and over with 4 years.

Other Benefits

As stated earlier, employee benefits—except for retirement—are subject to local determination. Consequently, there is wide variation among local provisions for leaves of absence, sick leave benefits, and district participation in group insurance.

Leaves of absence for study, without pay, are granted by 24 districts as a matter of local policy and by one district based on school board action on individual cases. Sabbatical leave is granted by 6 districts and other miscellaneous leaves of absence are granted by 9 districts.

Annual sick leave with full pay varies from 5 days to an unlimited number of days dependent upon board action in individual cases. Twelve districts allow 5 days and 15 districts allow up to 10 days per year. Three districts have provisions for additional days above the maximum at half pay. Allowable cumulative sick leave ranges from 15 days in one district to an unlimited number of days in 4 districts.

Group insurance programs have become an increasingly important part of the overall benefits of Utah teachers. All 40 school districts participate wholly or partially in the payment of group insurance premiums. Hospitalization and surgical coverage is provided in all 40 districts, extended medical benefits are available in 36 districts, and group life insurance is available in 18 districts. In 26 districts the total premium costs—including family benefits—are paid by the school district. In the other 14 districts the employee pays from 25 per cent to 55 per cent of the premium.

MAJOR RECOMMENDATIONS

1. **Efforts should be made by the state to encourage more vocational education teachers to pursue graduate degree programs.** Only 19 per cent (11 per cent excluding guidance counselors) hold the master's or higher degree. Provision of more attractive salaries for holders of graduate degrees should serve as an additional incentive for graduate work.

2. **Local school districts should provide salary scales that are comparable with those in neighboring states.** Four of the six adjoining states paid higher average salaries in 1965-66 than did Utah. Although statewide turnover is not a problem, more favorable salary provisions would strengthen the state in its bid to recruit and retain highly qualified teachers.

3. **Programs for the recruitment of teacher candidates should**

be conducted, particularly in areas of existing shortages. These activities should involve the coordinated efforts of representatives from the State Department of Public Instruction, from teacher training institutions, and from industry.

4. The process of evaluating and upgrading vocational teacher education programs should be given high priority. The state accreditation program should be basic, supplemented periodically by results of NCATE and regional accrediting association evaluations. Evaluative criteria should be developed cooperatively by state department personnel, representatives of teacher training institutions, local school leaders, and other appropriate resources.

5. More emphasis should be placed on systematic long-range planning of inservice programs. This necessitates the close cooperation of state supervisory and teacher education staffs. The employment of additional personnel, as recommended in other chapters, should help to effect these improvements.

6. Teachers should be assigned reasonable daily pupil loads. In 1965-66, many were in excess of recommended maximums.

7. A statewide teacher employment security law should be enacted in Utah. Both teachers and local school systems need the benefits afforded by job security provisions, and both must be protected equally against abuse.

8. Revised certification standards should reflect the national trend toward reducing the number of certificate types and upgrading certification requirements. The move to offer two basic certificate types with provisions for multiple endorsements is sound. Careful consideration should be given the development of certification requirements, including provision for appropriate recognition of trade experience.

CHAPTER 13

FINANCING VOCATIONAL AND TECHNICAL EDUCATION IN UTAH

The achievement of better nonvocational and vocational school programs, better professional personnel, and better educational plants and facilities are dependent to a considerable extent upon the financial effort and support people are willing to provide for education. Numerous studies reveal the direct relationship between the quality of education and the amount of financial input.

It should be the continuing concern of Utah citizens that all essential aspects of public education be adequately supported. Support for vocational and technical education programs should be commensurate with the needs of the state, the ability of the citizens to pay, and considered in light of the total state educational requirements. This chapter, therefore, is concerned with the significant aspects of financing public vocational and technical education in Utah as it relates to the total state educational finance program.

UTAH'S TAX STRUCTURE

Any discussion of the problems in providing public education and other public services should be prefaced with a discussion of the state's tax base for financing those services. Except for gambling taxes, Utah imposes all of the important taxes found in other states. Because of this broad tax coverage, Utah's overall tax structure is similar to the profile of the composite tax structure of its neighboring states and the fifty states as a whole. State tax collections by major type of taxation are shown as per cents of the total for Utah and contiguous states in Table 25. The data reveal no unusual practice in Utah. Rates for commonly used state taxes are shown in Table 26. While Utah's tax rates on general sales, cigarettes, and gasoline are equal to the highest rate paid in any neighboring state, the difference in rates is not sufficient to classify Utah's rates as excessive.

TABLE 25

MAJOR TAX COLLECTIONS EXPRESSED AS PER CENT OF TOTAL TAX REVENUE FOR UTAH, SELECTED STATES, AND THE UNITED STATES, 1965

	Per Cent									
State	*General Sales*	*Motor Fuels*	*Tobacco Products*	*Alcoholic Beverages*	*Insurance*	*Other Sales Receipts*	*Individual Income*	*Corporation Income*	*Licenses*	*Other*
Arizona	37.2	16.4	1.8	2.3	2.1	3.2	6.1	4.6	8.9	17.4
Colorado	23.7	17.2	2.8	3.0	3.0	1.3	22.4	8.9	12.2	5.6
Idaho		19.1	4.8	3.2	3.6	1.5	31.3	8.8	20.0	7.7
Nevada	30.6	15.3	5.8	4.5	2.4	17.5			17.8	6.3
New Mexico	33.5	15.2	4.0	1.7	2.2	2.4	8.6*		11.9	20.6
Utah	34.8	16.4	3.5	0.7	2.3	0.7	15.3	4.5	8.4	13.4
Wyoming	28.3	19.2	3.7	1.3	3.0				25.6	19.0
United States	25.7	16.5	4.9	3.5	2.8	4.2	14.0	7.4	12.3	8.7

*Combined corporation and individual income taxes are tabulated under individual income taxes.

Source: *CEF Report*, Committee on Educational Finance, National Education Association, February 1966.

TABLE 26

STATE GENERAL SALES, CIGARETTE, AND GASOLINE TAX RATES FOR UTAH, AND SELECTED STATES, JANUARY 1966

State	*General Sales (Per Cent)*	*Cigarette (Cents Per Pack)*	*Gasoline (Cents Per Gallon)*
Arizona	3	6.5	7
Colorado	2	5	7
Idaho	3	7	6
Nevada	2	7	6
New Mexico	3	8	6
Utah	3	8*	6
Wyoming	2.5	4	5

*Applies to cigarettes of standard length and weight—rate varies depending on length and/or weight.

Source: *CEF Report*, Committee on Educational Finance, National Education Association, February 1966.

Although declining some in relative importance, the property tax plays a prominent role in the Utah tax structure. Approximately 42 per cent of all state and local tax collections in Utah during the fiscal year 1964 were derived from the property tax.[1] Based on limited data, however, it would appear that the property tax burdens in Utah are not excessive. The amount paid for property taxes in Utah in 1964 was 4.5 per cent of total personal income. On this measure of tax burden, Utah ranks 5th among its neighboring states listed in Table 27 and

TABLE 27

STATE AND LOCAL PROPERTY TAX COLLECTIONS EXPRESSED AS PER CENT OF PERSONAL INCOME FOR UTAH, SELECTED STATES, AND THE UNITED STATES, 1964

State	*Per Cent of Personal Income*
Arizona	5.6
Colorado	5.1
Idaho	5.1
Nevada	3.0
New Mexico	2.8
Utah	4.5
Wyoming	5.6
United States	4.4

Source: *Rankings of the States*, 1965, Research Division, National Education Association.

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[1] The Utah Foundation. *Research Report, Comparison of Tax Systems and Expenditure Patterns—1964*. Salt Lake City: The Foundation, January 1965, p. 231.

24th among the 50 states. It should be noted also that for the nation as a whole property taxes amount to 4.4 per cent of personal income, or approximately the same as that for Utah.

UTAH'S ABILITY AND EFFORT TO SUPPORT PUBLIC SERVICES

It is generally assumed that the ability of the people of any given community to support public services is determined by the income of the people of that community. If this assumption is accepted, it follows that the ability of the people of Utah to support public services can be measured in terms of income and can also be compared with the ability of other states. Similarly, the degree to which this ability is being utilized can be measured by expressing total tax revenues as a per cent of the income of the people.

When personal income per capita is used as a measure of fiscal strength, Utah ranks 31st among the 50 states. The state's per capita personal income of $2,119 in 1963 was only 86.5 per cent of the national average of $2,449. After all income payments are subtracted, the state's per capita net effective buying income for 1963 was only $1,862. On this measure of ability, Utah ranks 32nd among the 50 states.

How does Utah's effort to support public services compare with its ability and with the effort of other states? Relatively speaking it compares fairly well. During the fiscal year 1963 state and local governments in Utah collected taxes equal to approximately $523 per person in the 21-64 age bracket. Nationally, state and local taxes averaged only $505 per person in this age group. Utah ranked 20th among the 50 states on this measure of tax burden.[2]

Another meaningful comparison of relative tax effort is obtained by relating taxes to income. Taxes as a proportion of personal income are generally regarded as the best single measure of the state's relative tax burden. On this measure of effort Utah ranks 18th among the 50 states—considerably above its rank in ability. It should be noted, however, that the state is outranked by five of the six neighboring states on this measure of effort to support all public services. (See Table 28.)

When Utah is compared with other states on the effort expended to finance public education it ranks very well indeed. First of all, Utah devotes a larger percentage of its total state and local budget to education than does any other state. Ap-

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[2] *Ibid.*, p. 228.

TABLE 28

PER CAPITA PERSONAL INCOME AND GENERAL REVENUES OF STATE AND LOCAL GOVERNMENTS FROM OWN SOURCES, UTAH, SELECTED STATES, AND THE UNITED STATES, 1964

State	*Per Capita Personal Income*		*Per Capita State and Local Government Revenues*		*Per Cent State and Local Revenues are of Personal Income*
	Amount	*Rank*	*Amount*	*Rank*	
Arizona	$2,142	4	$305.74	4	14.3
Colorado	2,464	3	326.23	3	13.2
Idaho	1,916	7	262.00	7	13.7
Nevada	3,386	1	381.48	1	11.3
New Mexico	1,918	6	301.53	5	15.7
Utah	2,119	5	271.04	6	12.8
Wyoming	2,475	2	350.11	2	14.1
United States	2,449		287.19		11.7

Source: *Rankings of the States*, 1965, Research Division, National Education Association.

proximately 48 per cent of the state and local expenditures in Utah in 1964 went for education. This compares with 41 per cent for the neighboring states and 37 per cent for the nation as a whole. Table 29 shows also that the percentage of Utah's investment of its total buying power (personal income less income taxes) in public education, Grades 1-12, in 1965-66 was larger than the average for the nation and larger than the percentage invested by any of the six states contiguous to it, except Wyoming.

TABLE 29

Estimated State and Local Revenue Receipts for Education Expressed as a Per Cent of Net Effective Buying Income in Utah and Selected States, 1965-66

State	*Revenue Receipts. (State + Local)*	*Effective Buying Income*	*Per Cent Revenue Receipts are of Effective Buying Income*
Arizona	$ 163,400,000	$ 3,156,815,000	5.17
Colorado	255,000,000	4,471,512,000	5.70
Idaho	73,700,000	1,268,910,000	5.80
Nevada	50,602,000	1,199,960,000	4.21
New Mexico	130,600,000	1,845,852,000	7.07
Utah	140,297,000	1,931,202,000	7.26
Wyoming	58,000,000	776,537,000	7.46
United States	22,798,500,000	428,951,000,000	5.31

Source: *Estimate of School Statistics 1965-66*, Research Division, National Education Association, and "Survey of Buying Power," *Sales Management*, June 10, 1965.

This great emphasis on educational expenditures is the result of a combination of factors peculiar to Utah. The state has an unusually large proportion of its population in the school age group. Private schools which absorb a substantial part of the school load in some states are only a minor factor in Utah. As a result, nearly all education at the elementary and secondary school levels in Utah is provided by the public schools. Utah, traditionally, has placed a high value on education and its citizens generally stay in school longer than do students in most states. Utah ranks at or near the top in the proportion of its population enrolled in public schools and also in the percentage enrolled in colleges. These factors all tend to push up the percentage of total state and local expenditures going for education without substantially improving the state's rank in per pupil expenditures for public education, average teacher salaries, and other measures of financial input to achieve educational quality. (See Table 30.)

TABLE 30

ESTIMATED TOTAL CURRENT EXPENDITURES PER PUPIL IN AVERAGE DAILY ATTENDANCE AND THE AVERAGE ANNUAL SALARY OF CLASSROOM TEACHERS IN UTAH, SELECTED STATES, AND THE UNITED STATES, 1965-66

State	*Current Expenditure Per Pupil*	*Average Annual Salary of Classroom Teachers*
Arizona	$524	$6,960
Colorado	530	6,387
Idaho	388	5,685
Nevada	535	6,900
New Mexico	524	6,415
Utah	473	6,250
Wyoming	661	6,118
United States	533	6,506

Source: *Estimate of School Statistics, 1964-65*, Research Division, National Education Association.

In summary, Utah's effort to finance all governmental services is above the average of the nation as a whole. Factors unique to Utah have forced a disproportionate share of state and local tax revenues to go to public education. Comparative data on the effort of the various states to finance public education cannot be used to make the case for greater effort on the part of Utah citizens. Comparative data on the financial input per educational unit of need indicate, however, that Utah citizens must do even more to achieve adequate financial support for education.

REVENUES FOR VOCATIONAL EDUCATION

Revenues for vocational education in Utah come from state, local, and federal sources. Total vocational education expenditures during the 1960-65 period are shown by source of funds in Table 31. Total vocational education expenditures increased approximately 248 per cent during the five-year period. This was accomplished by federal funds being increased by 302 per cent, local funds by 250 per cent, and state funds by 75 per cent during the period.

State Funds for Vocational Education

The state of Utah makes the following appropriations for vocational education:

TABLE 31

TOTAL VOCATIONAL EDUCATION EXPENDITURES IN UTAH, BY SOURCE OF FUNDS

	Federal		State		Local		
Year	*Amount*	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*	*Total*
1960-61	$239,191	16.9	$ 91,198	6.4	$1,086,381	76.7	$1,416,770
1961-62	250,888	15.6	90,524	5.6	1,271,725	78.8	1,613,137
1962-63	283,153	16.3	137,273	7.9	1,315,639	75.8	1,736,065
1963-64	282,136	14.1	122,639	6.1	1,596,299	79.8	2,001,074
1964-65	962,372	19.5	161,098	3.3	3,810,147	77.2	4,933,617

Source: Annual reports of Utah State Board for Vocational Education to U. S. Office of Education for respective years.

1. Appropriations to the State Board for Vocational Education for state administration and supervision of vocational education and for limited amounts of reimbursements to school districts and institutions of higher education for instruction and teacher training
2. Appropriations to colleges, junior colleges, and trade technical institutes for building construction, administration, supervision, instruction, equipment, instructional supplies, and other items
3. Appropriations to local school districts in terms of distribution units of the state minimum foundation school program, including funds for 40 additional distribution units for high school programs in vocational education in 1965-66 and 77 additional units in 1966-67
4. Appropriations for school building construction which may include facilities for vocational education
5. Appropriations to match Federal Manpower Development and Training funds.

In addition to funds appropriated in the minimum school program and the state school building program, the state of Utah appropriated the following amounts from state funds for vocational education programs under the State Board for Vocational Education for the 1965-66 and 1966-67 biennium:

Appropriation	*Amount*
Vocational Education	$ 293,800
Salt Lake Trade Technical Institute	1,207,000
Utah Trade Technical Institute	1,055,000
Manpower Development and Training	300,000

Federal Funds for Vocational Education

The state of Utah through its State Board for Vocational Education receives funds for vocational education programs under the provisions of various federal acts. These acts include the Smith-Hughes Act, the George Barden Act, the 1963 Vocational Education Act, and the Manpower Development and Training Act.

The Smith-Hughes Act provides funds to pay the salaries of teachers, supervisors, and directors of agricultural education; teachers of day, part-time, and evening classes in home economics; and teachers of day, part-time, and evening classes in trade and industrial education. In addition, funds are provided for the training of teachers, supervisors, and directors of agricultural education and teachers in trades and industries and home economics.

Title I of the George Barden Act provides funds for educational costs in the areas of agriculture, home economics, distributive, and trade and industrial education. Reimbursable costs may include the expenses incurred in preparatory, part-time, and evening instruction in the areas covered by the Act, travel expenses, costs of instructional supplies, teacher training costs, expenditures for state supervision and administration, and expenditures for instructional equipment. Title II of the Act finances training programs in practical nursing and other health occupations on either a preparatory or evening extension basis. Title III provides funds for the training of technicians in either preparatory or evening extension classes. Reimbursable costs under this title may include costs of instruction, teacher training, supervision, travel, equipment, and other current expense.

The 1963 Vocational Education Act gives financial support for vocational instruction, travel, instructional supplies, and equipment in the areas of secondary education, post-secondary education, adult education, and programs for the academically and socio-economically handicapped. In addition, funds are available for capital outlay for area vocational schools and for ancillary services, such as state administration and supervision, vocational guidance, teacher training, educational television, and curriculum development. Through the fiscal year 1968, one-third of the funds appropriated under the Act must be expended in post-secondary education programs and/or for building construction for area schools. After the fiscal year 1968, one-fourth of the funds must be expended in these areas.

The Manpower Development and Training Act finances programs for training unemployed and underemployed persons who cannot obtain full-time jobs with their present skills or who are working below their occupational potential. Subsistence and transportation allowances are made available to qualified trainees. The Act as amended in 1963 allows persons who have been in the labor force only two years to be eligible for training under the program; provides funds for special counseling and training programs for people 16 years of age or older who could not succeed in the labor market; and pays training allowances to youth 17 years old or older who are high school graduates or who have been out of school for one year and cannot be persuaded to return. Federal funds for 1965-66 are estimated as follows:

Vocational Act of 1963	$ 953,624
Smith-Hughes Act	38,478
George Barden Act	226,979
Manpower Development Act	136,164
	$1,355,245

FINANCING SECONDARY SCHOOL VOCATIONAL PROGRAMS

The foundation program of state and local support for current school expenditures, including current expense for vocational education in the secondary schools, in Utah is the "minimum school program." Under this program the state participates in the cost of a "basic state-supported" school program, a "state-supported board leeway" program, and a "state-supported voted leeway" program. The distribution of state funds under the basic state-supported school program is calculated as follows: (1) The state calculates the cost of the program in local school systems on the basis of $7,050 per distribution unit ($7,250 in 1966-67); (2) the state determines the local share of the basic school program as the return of a 16-mill tax levy on the assessed value of local property; and (3) the state pays the difference, if any, between the calculated cost of the program and the local share. The cost of the state-supported board leeway program is calculated on the basis of $140 per distribution unit allowed for each mill levied up to a maximum of 11 mills (12 mills in 1966-67). The state provides the difference, if any, between the total cost and the amount raised by the local levy. Under the state-supported voted leeway program, the state contributes an amount sufficient to guarantee $100 in 1965-66 and thereafter $110 per distribution unit for each mill raised locally not to exceed 10 mills as voted by the people.

Distribution units are allowed on the basis of one unit for each 27 pupils in average daily attendance in the regular school program and 50 pupils in the kindergarten program. Smaller ratios are used in computing units for programs for exceptional children and for regular school programs in necessarily existent small schools. Forty additional units are allowed for vocational education statewide during 1965-66, and 77 additional distribution units have been authorized for 1966-67. A fractional distribution unit is allowed also for each vocational agriculture or home economics teacher carrying on an approved program for vocational education beyond the regular school time at the rate of one-third unit for each fourteen weeks. Units for certificated nonteaching personnel are allowed at the rate of one unit for the district superintendent plus an additional unit for each nine units earned for teaching personnel.

The state of Utah provides funds for capital outlay purposes under its "continuing school building program." In addition, a school district can receive emergency state aid for school building purposes when it demonstrates a need for such aid beyond its ability to provide financially for the same by its own efforts. Under the continuing school building program, the state provides the difference between $700 per building unit and the return on a 6-mill levy on local taxable property. The number of building units for a local school district is the number of distribution units calculated for the minimum school program plus one-half of a distribution unit for each unit increase over the preceding school year. To qualify for emergency state school building aid, a school district's need for additional classrooms during the five-year period following the date of first qualification must equal 20 per cent of the number of existing classrooms, and the district's assessed valuation per child must be below the average of the averages of the assessed valuations per child of the school districts of the state. To compute the amount of state emergency school building aid to a given district the state (1) computes 10 per cent of the net long-term bond liability of the district; (2) adds to this liability the amount of annual interest charges to accrue during the current school year; (3) determines the yield of a 12-mill qualifying tax levy of the district; and (4) deducts this amount from the total computed in "2" above. The difference is the amount of state aid. These state appropriations for school building construction may be used to provide facilities for vocational education.

The local school districts receive state reimbursement funds, other than "minimum school program" funds, and federal funds for secondary school programs which meet the standards of Utah's State Plan for Vocational Education and are approved by the State Department of Public Instruction. Vocational funds reimbursed to local school districts are based on approved budgets of anticipated expenditures. Such budgets are accompanied by a written program of work describing instructional programs and giving a breakdown of proposed expenditures for specific purposes.

The survey staff evaluated the state's program of financial support of public education, Grades 1-12, which includes secondary school vocational education, in the light of selected criteria. The criteria and the evaluation are as follows:

1. *Is provision made for adequate financial support?* While the Utah program is flexible and allows expenditures for the essential elements of school costs (both current expense and capital outlay), some question can be raised about the adequacy of the amounts provided from state and local sources. Utah ranked 26th among the 50 states in total public school revenue receipts per pupil in average daily attendance in 1964-65. Increased support for public education by the 1965 legislature should improve this ranking some, but Utah's expenditure per pupil for current operating expenditures in 1965-66 is estimated to be approximately $60 below the national average and still below each contiguous state with the exception of Idaho. Additional units for vocational education appear justified in the minimum school program above the 40 units provided in 1965-66 and the 77 units provided for 1966-67. Program requests for 1966-67 are for 112 units, or 35 units more than the number provided.
2. *Are there undesirable state controls?* The survey staff found no evidence of state requirements which restrict local initiative. The allocation of funds on a distribution unit basis avoids state earmarking of local funds and the incentive state-supported leeway programs provide considerable opportunity and encouragement for the development and exercise of local leadership and responsibility in education. In fact, there is evidence that greater state controls may be necessary if adequate vocational training is provided at the local school level. In the light of the manpower needs of the state and the corresponding high percentage of high schools with inadequate vocational education offerings, the state would be justified in requiring that a certain percentage of distribution units allocated to a school district be used in vocational education. The survey staff found some opinion among the staff of the Division of Vocational Education that greater state control may be necessary if vocational education is to get the full benefit of the additional distribution units provided under House Bill 63. Additional

units earned for vocational education purposes may be used for other purposes unless strict state controls are enforced.

3. *Do the educational and financial provisions for the state's program encourage sound and efficient organization, administration, and operation of local school districts and schools?* In the opinion of the survey staff state funds are not being used to subsidize or perpetuate inefficient or unnecessary small schools. Special allowances are made, as they should be, for necessarily existent small schools. Approval of these schools is made only when unusual enrollment situations, hazardous roads or climatic conditions, or other special factors make further consolidation impossible or inadvisable. Approval of small schools is given on a year-to-year-basis. The size of the high school determines to a great extent the ability of local boards of education to provide a wide range of academic and vocational offerings at a reasonable unit cost. Continued leadership and effort by the state in consolidating small high schools into more efficient operating units is a requisite for developing adequate programs in vocational education in every Utah high school.

4. *Does the plan for financing the state's minimum program assure reasonable equity for all taxpayers?* Two subquestions must be answered to assess this equity: (1) Is local financial ability properly and equitably determined? and (2) Are the sources of revenue for school support reasonably related to the sources of income of the people of the state?

   If public education is to serve all the people and is regarded as essential to the welfare of the community and the state, it follows that each citizen should share equitably in financing the minimum program. Since local revenue for schools in Utah is derived primarily from the property tax, assessments should be uniform or some other valid means of measuring local taxpaying ability should be devised and used. A sales-ratio study conducted by the Utah State Tax Commission in 1963 indicated that improved property in Utah was assessed at about 15.7 per cent of market value, with county averages ranging from less than 15 per cent in a few of the counties to more than 20 per cent in others. Inequitable assessments result in inequitable allocations of state aid to local school districts, as well as undermining the general tax base for the support of the public schools. Utah's property tax equalization program is well underway. It should be vigorously pursued to a successful initial completion and then should be continually updated.

There is another consideration which the state should make in calculating the local share of state-supported programs. Data are available to show that as population density increases, the per capita cost of municipal government sharply increases. Police organization, transportation facilities, traffic control, fire protection, waste removal and disposal, sanitation facilities, smoke control, street maintenance, welfare programs, public hospitals, and libraries are a few of the services that increase municipal expenditures. Of course these services should be provided also in rural areas. But the people in the urban areas expect such services and pressure the authorities for more and more. To the extent that these services are paid for by property taxation, Utah urban school districts are not as wealthy for school purposes as a rural district with comparable per pupil assessed value of property. This fact of urban overburden in the provision of governmental services other than education could be the justification for an adjustment in the local share of state-supported programs for the few Utah school districts containing the vast majority of the state's population.

Utah's rather diverse tax base taps several sources of revenue. No disproportionate share of the revenue comes from a single tax base. The sources of revenue for school support appear to be reasonably related to the sources of the income of the people of the state.

5. *Are the citizens of each local school district authorized and encouraged to provide and finance such educational opportunities beyond the state minimum program as they desire?* An outstanding feature of Utah's state minimum program is its state-supported leeway programs. The state guarantees leeway support on the basis of local effort. Thus local citizens are encouraged to vote additional taxes on themselves to provide additional or better educational services and facilities than those provided through the state basic minimum program. During 1965-66 all but 2 of the 40 Utah school districts

levied the maximum 11 mills for participation in the state-supported board leeway program. Tooele school district levied only 8 mills and San Juan only 3.9 mills. The voters in 10 school districts levied an average additional millage of 4.86 mills for participation in the state-supported voted leeway program.

6. *Are the measures of educational need used by the state in calculating the cost of state-supported programs sound and realistic?* The framers of the Utah program of state support for public education have made a praiseworthy effort to recognize valid cost differentials in various aspects of the educational program. Thus special allowances are made to adjust for sparcity of population in distribution units provided for necessarily existent small schools, in lower pupil-unit ratios for special education services, in calculating the cost for pupil transportation, and in recognizing the growth factor in calculating the number of building units allowed a local school district participating in the continuous school building program. The additional costs required to provide adequate vocational programs are partially provided for in the additional distribution units allowed. As stated earlier, however, this number should be increased.

FINANCING POST-SECONDARY SCHOOL VOCATIONAL PROGRAMS

Each post-secondary institution in Utah desiring state and federal vocational education funds must submit by January 1 to the State Department of Public Instruction a projected budget for the following fiscal year. Budgets must include detailed information on ongoing or expanded programs, new programs, and developmental programs. Budgets allotted to each institution are based on the number of full-time equivalent students in relation to the total number of full-time equivalent students in similar schools in the state. After school budgets have been determined, the officials of the post-secondary institution and a representative from the State Division of Vocational Education determine the programs to be included in the budgeted amounts.

The use of full-time student equivalents provides an objective basis for allocating state and federal funds to post-secondary vocational programs. A differentiation may need to be made, however, between various types of technical courses to compensate for cost differentials. The present method of fund allocation should be continued while cost data by type of course are being accumulated. Cost experience should then be used as a basis for determining the need for a cost per student differential for certain post-secondary vocational programs.

In addition to the state and federal reimbursement funds discussed above, Utah area trade-technical schools receive reimbursement from local school districts to cover the costs of vocational programs conducted for high school students. The school district is allowed one distribution unit under the minimum school program for each 27 juniors or seniors in average daily attendance in vocational courses approved by the State Board for Vocational Education and conducted by area vocational schools. The area vocational schools are reimbursed by the local school districts concerned on the basis of one and one-half distribution units out of each two distribution units the district may claim for such training.

Financing Adult Education Programs

Local school districts are reimbursed from state and federal funds for the difference between the cost of approved adult programs in vocational and technical education and tuition collected from enrollees. Allowable program costs include the instructors' salary, nominal travel costs for the instructors, and the cost of instructional supplies. Instructors are paid at the prevailing rate established by the school district board of education and reimbursements are based on an hourly rate not to exceed $5 per hour. A nominal fee (usually $1-$5 per enrollee per course) is charged each enrollee. Each school district participating in the program establishes the tuition rate per course in terms of course length, amount of instructional supplies, teacher costs, and other local factors. Courses may be offered free to the enrollees where necessary circumstances dictate. School districts conducting adult programs provide instructional facilities (classrooms, laboratories, and shops), heat, light, power, and janitor service as the local contribution for adult programs.

The State Department of Public Instruction encourages all school districts to conduct adult programs in vocational training for persons who are academically and/or socio-economically handicapped. These may include welfare clients, migrant workers, Indians, and others. School districts may be reimbursed for as much as 100 per cent of the cost of vocational programs for such persons provided these programs are conducted under standards prescribed in the Utah State Plan for Vocational Education.

FINANCING VOCATIONAL GUIDANCE

As shown in Chapter 9, vocational guidance, vocational counseling, and occupational information are merely parts of the broader area of guidance and counseling. Thus the adequacy of vocational guidance services is dependent largely on adequate provisions being made for the broad area of counseling and guidance. Only limited provisions for such services are made in the state-supported basic minimum program. One distribution unit is allowed for certificated professional non-teaching personnel for each nine regular distribution units allowed. Some of these distribution units could be used to finance the employment of guidance personnel. However, these additional units are needed also for such positions as school principals, librarians, and supervisory personnel. Only a relatively small proportion of these additional units can be allocated to the guidance and counseling function. However, local school districts are encouraged to go beyond the basic state-supported program through state-supported leeway programs to provide enriched services in various school areas, including guidance and counseling. The provision of one distribution unit for non-teaching professional personnel for each nine regular distribution units is fairly consistent with practices in other states. Utah's incentive program is vastly superior to most states.

With state funds as the base, local school districts use federal funds provided under Title V of the National Defense Education Act and local funds for the provision of guidance and counseling services. Utah's share of federal funds appropriated under this title for 1965-66 is approximately $145,000 which must be matched with local funds. Fortunately local school districts are overmatching federal funds by substantial amounts in qualifying for NDEA funds. (See Chapter 9.)

Provisions of the Vocational Education Act of 1963 presume that "the State Plan shall provide for such vocational guidance and counseling personnel and services as are required by the program of instruction." Under this Act, vocational guidance and counseling are considered ancillary to the program of vocational instruction and an essential supporting arm in the total program of vocational education. Approximately $56,000 was budgeted from federal vocational funds sources for guidance purposes in 1965-66. These funds were used to provide staff services at the state level and to reimburse local school districts for part of the costs incurred in providing "basic occupations courses." These courses are regarded as group guidance courses which are designed to orient young people to job and training opportunities. They may be taught by vocational teachers or guidance counselors. Local school districts receive $100 per course reimbursement from vocational funds. The number of such courses is dependent on the sizes of the high schools (Grades 10-12 enrollment) in the school district. The need for additional funds for strengthening state services in the guidance area is documented in Chapter 9. This chapter also makes suggestions for utilization of federal funds now available for guidance and counseling services.

In summary, the survey staff feels that present state support programs form a base on which to build an adequate program of guidance and counseling in local school systems with local school district and federal funds. However, the state is relying too heavily on federal funds for supporting the State Department of Public Instruction staff in pupil personnel services, and more federal funds should be channeled into experimental or innovative approaches to vocational guidance activities.

SUMMARY

The findings in this report call for many improvements in the public vocational and technical education programs in Utah. Some of these improvements can be effected without increased expenditures. Many of the present deficiencies, however, are related directly to financial input and form the basic documentation of facts supporting increased financial support for vocational and technical education in Utah.

Increased financial support for vocational and technical education could be accomplished by either or both of two methods: (1) shifting of some funds which are now being spent for other educational purposes to vocational and technical education, and (2) providing additional funds for vocational and technical education. Utah might well consider using both of these methods to some extent. For example, the survey staff feels that a prerequisite to achieving adequate programs in vocational and technical education is changing the image of these programs held in the minds of many citizens and public educators—the feeling that vocational training is a stigma on youth. A change in this feeling to one of respect rather than toleration would not only create the public interest and acceptance necessary for increased financial support but could bring about a shift in the emphasis of present educational programs in the high schools and post-secondary institutions. A change in emphasis would be accompanied by a shift in the purposes for which present funds are spent. Some shift in purpose seems indicated at both the high school and post-high school levels. This is supported by the fact that large numbers of Utah college graduates leave the state in order to secure employment while the highly skilled technical jobs within the state are extremely difficult to fill because of a lack of trained personnel.

Utah's relatively low competitive position in total revenues per pupil for public education does not suggest that the financial input necessary for quality vocational and technical education can be achieved by simply reallocating funds presently being spent on the total educational program. Additional financial resources will be needed. Thus Utah citizens must be called on to make an even greater effort financially to support vocational and technical education at all levels, even though their present effort to support all governmental services is a truly laudable one.

MAJOR RECOMMENDATIONS

1. **The state of Utah should provide the additional financial support required to implement the recommendations for improving vocational and technical education contained in this report.** With the uncertainty of further increases in federal funds and with the large percentage of vocational education funds now provided by local school districts, increased funds should come primarily from state sources. Thus the citizens of Utah must exert a greater effort to provide financial support for public education, even though their present effort is a truly laudable one.

2. **Sufficient additional distribution units should be provided under House Bill 63 to finance all requests for vocational programs which meet the standards of the State Board for Vocational Education.** The problem of providing adequate secondary school vocational education programs in Utah school districts is largely that of overcoming local school district lethargy. Providing additional distribution units for vocational education should be an important incentive for more school districts to establish vocational education programs. Utah's neighboring

state of Wyoming has such an "open-ended" provision of vocational education units in its minimum foundation school program.

3. **The state of Utah should exercise stricter control over local school districts in the prescription of programs for vocational education.** In the light of the manpower needs of the state and the corresponding high percentage of high schools with inadequate vocational education offerings, the state should require that a certain percentage of distribution units allotted to a school district under the state's basic state-supported school program be used in vocational education. Greater state control may be necessary if vocational education is to get the full benefit of the additional distribution units provided under House Bill 63. Additional units earned for vocational education purposes may be used for other purposes unless strict state controls are enforced.

4. **The use of full-time student equivalents as a basis for budget allotments for post-secondary school vocational programs should be continued until cost data by type of programs have been accumulated. Cost experience should then be used as a basis for determining the need for a cost per student differential for certain post-secondary vocational programs.** The use of full-time student equivalents provides an objective basis for allocating state and federal funds to post-secondary vocational programs. A differentiation may need to be made, however, between various types of technical programs to compensate for cost differentials.

5. **The state of Utah should vigorously pursue its property tax equalization program to a successful initial completion and then should continually update the program.** If public education is to serve all the people and is regarded as essential to the welfare of the community and the state, it follows that each citizen should share equitably in financing the state's minimum foundation and state-supported leeway programs. Since local revenue for schools in Utah is derived primarily from the property tax, assessments should be uniform or some other valid means of measuring local taxpaying ability should be devised and used. Inequitable assessments result in inequitable allocations of state aid to local school districts and undermine the general tax base for the support of the public schools.

6. **The state of Utah should recognize the special problems of metropolitan areas in providing all governmental services in**

calculating the local school district share of state-supported programs. Data are available to show that as population density increases, the per capita cost of municipal government sharply increases. Police organization, transportation facilities, traffic control, fire protection, waste removal and disposal, sanitation facilities, smoke control, street maintenance, welfare programs, public hospitals, and libraries are a few of the services that increase municipal expenditures. To the extent that these services are paid for by property taxation, Utah urban school districts are not as wealthy for school purposes as a rural district with comparable per pupil assessed value of property. This fact of urban overburden in the provision of governmental services other than education is justification for an adjustment in the local share of state-supported programs for the few Utah school districts containing the vast majority of the state's population.

7. **The state should continue to guard against state school funds being used to subsidize or perpetuate inefficient or unnecessary small schools.** The size of the high school determines to a great extent the ability of local boards of education to provide a wide range of academic and vocational offerings at a reasonable unit cost. Continued leadership and effort by the state in consolidating small high schools into more efficient operating units is a requisite for developing adequate programs in vocational education in every Utah high school.

CHAPTER 14

PHYSICAL FACILITIES FOR VOCATIONAL-TECHNICAL EDUCATION

The pattern of reporting in this chapter does not follow the general style set by preceding sections of this report. Some explanation is needed for the inclusion of the observations herein presented, for the decision was made not to include physical plant facilities in the survey assignment.

In the first place, the strategic importance of having adequate facilities for any desired program in education is recognized, but in no area is the importance greater than for vocational-technical programs. Indeed, facilities and equipment constitute a basic element in several fields as a sine qua non of the program (such as typewriters in Office Occupations, shop equipment in Trades Training, and laboratories for Homemaking).

In the second place, the survey director anticipated that a number of staff members would refer to the adequacy of facilities for their particular fields, and that some coordination of varied observations would be needed.

In the third place, the several states report annually to the United States Office of Education an inventory of their school plant facilities. Therefore, Utah had a more detailed inventory in the state offices than the survey team could hope to develop in this study. This was ample justification for the decision to omit this area from the study plan, yet the survey staff felt that its observations, if reported, might provide state leaders with an impartial sampling check on the validity of the state's own inventory.

For these reasons, a staff specialist in the field of school facilities was added to the team. He spent a week of observation in fifteen schools, selected in consultation with the state department specialist and representing a full range of local school conditions. Also, information and observations made by other staff members have been incorporated to a more limited degree, but extending the number of school plants reported upon to a total of eighteen secondary schools, two trade-tech schools, and one elementary school. While these observations will not permit conclusive statewide generalizations, they are included in the report as a sampling for state officials in their appraisal of the next annual inventory. Observations summarized by individual school centers follow.

FIELD NOTES

Salt Lake City and Bountiful

A. Hillcrest High School

1. *Counseling:* The counseling space for 4 (2m-2w) appears adequate although the area was created as an afterthought. The suite of rooms contains a common waiting area and occupational reference library; individual counseling offices; and small group (6-8) testing rooms. The furnishings are adequate, arranged in a formal manner, and, according to one of the counselors, the physical space works quite well. Some rearrangement of the semi-movable partitions might help in the "flow" of students. The entire area is located adjacent to the central office near the main school entrance and appears to be convenient to both students and parents.
2. *Homemaking:* The suite of homemaking laboratories and classrooms is adequate in size and well equipped in perimeter pattern. An attempt was made by the architect to control sky brightness and direct sunlight by the use of exterior, fixed aluminum louvers covering the upper half of the fenestration pattern throughout this entire plant. However, on an overcast day, this device was ineffective to the extent that under foot candle meter readings the accepted 10-1 ratio was exceeded. The instructors also mentioned that when snow was on the ground the reflected light was most objectionable. This condition could be corrected by using venetian blinds or re-glazing with light-reducing glass. Under the present situation it is extremely difficult to use visual aids (movies, film strips, etc.) in an effective manner. The ratio of room width to length in both the foods and clothing laboratories exceeds the accepted 1:1½ maximum relationship.
3. *Industrial Arts:* Industrial arts laboratories and classrooms are provided to accommodate programs in auto mechanics, machine shop, welding, woodworking, electronics and radio, general metals, electricity, and technical drawing. Each laboratory has an adjacent classroom

and instructor's office. The total space for instruction, conference, and storage is adequate. The equipment is well arranged and of excellent quality. Adequate provisions are made for lighting and exhaust of fumes and dust by central systems. All the shops are at ground level with adequate service entrances. This aspect of the Hillcrest plant reflects effective planning.

4. *Art:* A two-laboratory department is devoted to both two and three dimensional media: painting, drawing, sculpture, ceramics, lapidary work, design, and commercial art. Again, these laboratories are well equipped, adequate in size, and effectively lighted. Both areas are well arranged to permit a varied media program in depth.
5. *Business:* Adequate and effective laboratories are available for programs in typing, bookkeeping and accounting, stenography, general business, and commercial law. Each laboratory is well equipped and adequate in size. The furniture and equipment arrangement appears to be both flexible and adaptable to a broad program in this area.
6. The Hillcrest plant scores high in terms of an effective educational structure. The building reflects considerable "know-how" in relating design to educational concept. This observer has seldom had the opportunity to visit a comprehensive high school where more attention, space, and funds have been devoted to laboratory experience for youth than at Hillcrest.

B. *West High School*

Much of this plant is housed in two, old, multi-story structures. The buildings have had recent renovation and are in good condition. The building containing all of the shops was built as a shop structure and provides an effective plant for the existing program.

1. *Home Economics:* A multiple laboratory accommodates the programs in foods, clothing, and home living. In addition to these rather typical programs, an attempt is made to provide terminal experiences in waitress and housekeeping vocations. Much of the actual learning in these two areas is on-the-job training but additional facilities are needed for the in-school aspect of the housekeeping area.

2. *Counseling:* A five-office area adjacent to the administrative section is used for counseling services. The area lacks space for testing, group guidance, and an effective vocational or occupational reference library.
3. *Commercial:* A series of laboratories is devoted to typing, bookkeeping, shorthand, business machines, etc. Some of the areas are small but not ineffective. The equipment is good and the laboratories are well arranged. For many students this is terminal education and they move directly from high school into jobs as file clerks, clerk-typists, and secretarial trainees.
4. *Industrial Arts:* Adequate and well equipped shops, laboratories, and classrooms are devoted to electricity, electronics, technical drawing, crafts, carpentry and cabinet work, machine shop practice, welding, auto-mechanics, and general metals. Each laboratory has its own classroom and instructor's office. Central exhaust systems are provided in all shops where necessary for fume and dust control. The lighting levels could be raised in some laboratories, but the present condition is well above the critical stage. The practice of placing asphalt tile on a machine shop floor is questionable and should be discouraged inasmuch as asphalt tile soon disintegrates when in contact with oil and grease. The "under-construction" storage of student projects in the cabinet shop is somewhat limited but not to the point of hampering the program.

The buildings throughout reflect good housekeeping practices on the part of both custodians and instructors. This plant has had many years of use but it is in good condition and will serve well for some years to come.

C. Lincoln Junior High

1. *Counseling:* Two offices adjacent to the central office area accommodate the counseling services. The facilities are small and not suitable for group guidance, testing, or exploratory reading in occupational fields.
2. *Art:* Two art laboratories have been developed from classroom areas in the main two-story building. Both rooms are too small. An art laboratory of less than 1200 sq. ft. restricts program development and denies a group of 30 students enough elbow-room to engage in a diversified program.

3. *Shops:* Two laboratories and adjacent office and classrooms, plus group toilet facilities accommodates the shop program. This is a separate building from the main plant. The design concept has merit but the laboratories are too small. A shop of less than 1500 sq. ft. places severe limitations on both program and possible learning experiences for a group of 30 students. In both of these shops the equipment was appropriate and well arranged, but because of space limitations, something less than an effective program was in operation.

A careful engineering check on the main building is indicated. This structure may be ready for demolition in the near future.

D. *Bountiful Junior High*

The comments relative to Lincoln Junior High are equally true for Bountiful: too small—too restricted in program. This observer is convinced that the junior high level is the place where a broad base of experiences is important, and where contact with many materials has a positive impact on future intelligent choice. The denial of these experiences contributes to the dropout problem and to the lack of decision on the part of the older student.

Richfield

Richfield Sr. High

1. *Counseling:* The space provided for counseling services —office space, waiting area, testing room located adjacent to general offices—is adequate for one person.
2. *Home Economics:* A typical two-teacher suite is provided for home economics. The space is adequate in size and well equipped. Light control devices are suggested for the extensive fenestration in both laboratories.
3. *The Sevier School District Vocational Center:* This one-story structure provides sufficient classroom and laboratory space for programs in:

   a. *Auto Mechanics:* A well equipped shop is provided for approximately 20 students. The laboratory has had two years of use by both day students and adults in evening classes. This dual program presents some difficulties in storage of project components but the instructor has managed to cope with the situation in an effective manner. Space, ventilation, work areas, and arrangement of equipment are good. The general illumination level is low but not critical and work stations are equipped with auxiliary lighting. This program is terminal for some students.

b. *Fender and Body Shop:* Well equipped and arranged laboratory space is available to fender and body shop instruction for approximately 20 students. This facility, as does the auto mechanic shop, has its own classroom and provides a program for both adult and regular students. The spray paint area is constructed to code specifications and is well lighted and ventilated. For some students this is a terminal program.

c. *Electronics:* An adequate laboratory with 20-plus work stations is provided for instruction in electronics. The area is designed for both lecture-demonstration and individual bench work. Adequate storage is provided and the laboratory is well lighted. One class is presently being taught in this area.

d. *Drafting:* An adequate drafting laboratory with good equipment is provided for approximately 30 students. Equipment is adequate for both architectural and machine presentation. The lighting system produces 80-foot candles with even distribution.

e. *Business Education:* Two business education laboratories provide adequate space for the full range of typing, business machines, bookkeeping, shorthand, and office reproduction. The areas are well arranged, lighted, and equipped. One area has a carpet floor covering installed for noise control.

f. *General:* This entire facility was designed and built with a well rounded program as its core. Three areas are in the process of development: (1) home appliance repair, (2) cosmetology, and (3) carpentry and cabinet work. Two small high schools in nearby towns bus students to this center for work in the several offerings. There is some indication that in the near future additional laboratory space will be needed. Land is available for an addition to the facility and, when this is planned, space should be provided for an administrative center for the director, secretary, counselor, and a technical library.

Manti

Manti Sr. High School

1. *Counseling:* One counselor is housed in a very small office opposite the principal's office at the main entrance to the school. No provisions are made for individual or small group testing. There is no evidence of a facility to house occupational information, and there is almost complete lack of privacy.
2. *Vocational Agriculture:* Classroom work in vocational agriculture is housed in a standard classroom in the main building. Laboratory work is housed in the shop building, using space in the general metals laboratory.
3. *Mechanical Drawing:* The mechanical drawing laboratory with good equipment is adequate for 20-25 students. One class is presently using this facility. The housekeeping practices in this area are deplorable. Control devices should be installed on the fenestration section to reduce a serious light problem.
4. *General Metals:* The general metals shop—a minimum size, one-teacher area—could accommodate 15-20 students if considerable rearrangement of equipment and work stations was accomplished. Joint use of the shop by both the general metals students and the vocational agriculture class demands a high degree of coordination and excellent organization of equipment, materials, and procedures. These factors were not in evidence at the time of visitation. The storage areas have not been equipped with shelving after two years of operation due to reported lack of funds. This contributes to the general confusion of the area. The power and hand tools, work benches, and welding equipment showed ample evidence of abuse and lack of maintenance.
5. *Woodworking:* The one-teacher area for woodworking instruction is adequate in terms of space, power equipment, lighting, and work stations. The adjacent classroom area is presently being used to house a program in leathercraft, slip-casting of ceramic miniatures, and some work in plastics. The storage areas have not been developed and the instructor's office is a confused space. The area could be developed into an effective laboratory if better housekeeping practices were introduced, storage

areas were equipped, and total organization of the area was developed.

6. A shower, locker room, and toilet area was included in the building but has not been used except for the toilets.
7. This building could be developed into an effective facility for three teachers with 20 students in each area. A general house cleaning is necessary in all areas; some equipment needs to be replaced, especially the work benches; reorganization of tools and equipment is mandatory in the metals area; the storage spaces need to be equipped with suitable shelving and cabinets; and the entire program should be placed under effective supervision.
8. Nine boys from this school attend Snow College at Ephraim on a part-time basis for instruction in auto mechanics.

Mt. Pleasant

Mt. Pleasant High School

The program in home economics, woodworking, and general metals is housed in a separate building constructed under the WPA in 1936. This facility has had 30 years of hard use with little or no maintenance. The woodworking and metals areas are housed on the first floor and in reality constitute one shop area with one teacher presently employed. The home economics program is on the second floor with one teacher in charge.

This entire facility has reached the stage where demolition should be considered. The building could possibly be renovated but the cost factor would be excessive and the result, at best, would be marginal. The equipment throughout is badly worn and much of it should be replaced. In general appearance the words depressing, confused, dirty, and ineffective are appropriate.

Note: *Manti and Mount Pleasant*

These two small high schools 21 miles apart are in a difficult position. Neither school can afford much of a program in industrial arts, vocational education, home economics, business education, and guidance because of low enrollments and lack of district funds. The community of Ephraim, located half-way between Manti and Mount Pleasant, presently is the home of the small, but growing, Snow College offering work in the vocational-technical field. The closing of the high schools at Manti and Mt. Pleasant and the development of a new high school *center* at Ephraim is educationally justifiable. To continue to spend money at the two schools, either for renovation or new structures, is highly questionable. A new center at Ephraim could provide a fairly adequate broad-base program in both academic and nonacademic areas and Snow College could complete the program with two-year terminal courses.

Provo
Utah Trade Technical Institute

1. The chief plant problem at this facility is the restricted site. The existing 13 acres are totally occupied by buildings and limited parking spaces. The unforeseen street development pattern is unfortunate but can be reduced in impact by the construction of pedestrian over-pass walkways when lands now contemplated for purchase are acquired. Securing of additional land should be accomplished as soon as possible. The cost factor will be high, perhaps as much as $25,000 per acre, but in order for this excellent plant to realize its full potential, additional space is of prime consideration.
2. The counseling program has just started at this school. The proposed development will require space now used for instruction but can be accomplished at low cost through remodeling. The entire plant has a clear span structural system with interior, nonload bearing partitions which can be easily rearranged.
3. Some over-crowded spaces were noted, particularly in the body shop. A fire or explosion in this area could result in loss of life because of blocked exits and passageways.
4. This is an excellent plant, constructed in phases since 1951. The overall plan is attractive and effective. Much "know-how" is evident in arrangement of spaces, equipment, storage, services, and program content. As new structures are added attention should be given to a more effective visual environment, wider halls and stairways, and more floor space for the programs in fender and body work and heavy equipment.

Salt Lake City

Salt Lake Trade Technical Institute

It is a difficult problem to create a usable educational facility out of a laundry building constructed in 1901; yet this has been done and in a remarkable fashion. No specific evaluation of this plant is made here inasmuch as a new facility is presently under construction on a 78-acre site.

The new plant, as indicated, will provide an excellent facility. If at all possible, the "time-table" for construction should be advanced so that the full plant would be in operation in the next two- to three-year period, with spaces for all anticipated departments, including Distributive Education.

There is some feeling at the local level that the old plant should be retained for instructional purposes in certain areas. This idea is at least suspect from the standpoint of the building condition. The wood floors, stairs, ceilings, and partitions show signs of final deteriorations. To replace these elements with fire-proof or fire-resistive materials would require a complete renovation. This work, without choice, would also involve a new electrical and plumbing installation. The cost factor for the type of renovation required for several shop programs could easily be in the $7.00-$8.50 per sq. ft. range or about two-thirds the cost of new construction. Further, the site is highly restricted, which presents serious problems in parking for students and faculty as well as service drives to the plant.

The suggestion is made that serious consideration be given to the sale of the entire facility as soon as quarters for all programs, including DE, are available at the new site, and the proceeds from this sale be applied to the new construction program.

Ogden Area

A. Weber High School

This plant is located on a small site serving the high school youth of several communities who are transported to the center by bus.

1. The shop facilities for crafts, woodworking, general metals, farm mechanics, auto mechanics, and mechanical drawing are housed in a WPA structure built in 1938. The original detached building was designed to serve as a bus maintenance facility for the district. Through the processes of adaptation and additions the present facility has been developed. With the exception of the areas for crafts and mechanical drawing, the several spaces are adequate in size. Much of the equipment is old and badly worn and should be replaced. The grease pits in the automotive shop should be filled and a floor level slab poured. These existing pits are a definite safety hazard. The unused overhead doors should be removed and the openings bricked-up. Exhaust systems should be installed to remove fumes and shavings. The entire interior of the building should be painted and a high level illumination system installed. An addition should be constructed to house the mechanical drawing and electronics program which would permit the crafts area to expand. Careful interior planning of spaces, equipment location, work stations, and service facilities could produce an effective facility provided the above suggestions were placed in effect.
2. Home economics, art, business education, and guidance are housed in the main plant. Minimum size spaces have been created by removal of partitions to accommodate these several programs. The equipment is acceptable and well arranged.

B. *Clearfield High School*

This new plant has good facilities in terms of size and equipment for the several programs. In terms of the comprehensive high school here is a most acceptable facility.

C. *Roy High School*

1. Adversity befell the industrial arts areas of this plant before construction was started. Bids were taken on the entire plant and exceeded the budget by $125,000. In order to proceed, the industrial arts center was reduced one-third in size to bring the construction costs down to the money available. As a result of this action, each space is too small for a class of 25 or 30 students. Corrective measures will be difficult.

a. Restrict class size to 15-18 students. This will permit effective instruction but many students will be denied the opportunity to participate.

b. Remove the exterior tilt-up wall sections and increase the size of each laboratory to provide space for a class of 25 or 30 students. This will involve equipment relocation and the re-alignment of partitions, plus a considerable out-lay of money.

c. Construct new area shops in woodworking, metals, and power machines, and use the existing facilities as unit shops for advanced, terminal instruction with enrollment restricted to 15 students. This is a questionable solution in view of the opportunities already present at Weber College located in the same community.

This observer can think of no really good solution to the existing problem. In a very real sense it would have been better planning to have omitted the entire element until adequate funds were available than to have built a less than minimum facility.

2. This nationally publicized plant and program represent a marked departure in secondary education. Whether or not the concept is effective only time and careful evaluation will reveal. One design factor of the entire plant can be evaluated in the negative; namely the visual environment. First, the light reducing glass used in the fenestration pattern does not keep out enough natural light (both direct and reflected) to permit the use of projection equipment. Second, the entire artificial illumination system exceeds the desired 1-10 brightness ratio.

Summit Area

A. Park City High School

1. This small school has one-teacher programs in home economics, commercial education, and general shop work. The general shop is adequate in size for the few students enrolled but poorly lighted and equipped. If this facility is to remain in use it should be completely renovated, painted, lighted, and sufficient work stations and equipment added to provide a general shop program.

2. The areas of home economics and commercial education are housed in the two-story building. Spaces have been arranged out of existing classrooms by partition removal

and the installation of some equipment. The entire facility is minimum.

B. South Summit High School

1. The programs in business education, home economics, guidance, and vocational agriculture are housed in the main, two-story plant.
2. The combination shop and bus repair facility is a relatively new building (1962). The section of the building devoted to instruction is adequate and the equipment is new and appropriate for an elementary course in woodworking. Classroom and storage spaces are adequate. Some work is offered in elementary welding. No fume or dust removal system has been installed. Additional equipment is needed to provide a program in general shop experiences.

C. North Summit High School

1. A renovation program has been completed in this plant and, in so doing, minimum spaces have been developed for one-teacher stations in guidance, home economics, business education, and vocational agriculture. Some new equipment and storage elements have been installed.
2. The industrial arts and agricultural mechanics offerings are housed in a detached, one-teacher building. The equipment is predominately orientated to woodworking. If this phase of the work is to be continued, the entire facility should be renovated, painted, relighted, and additional equipment and work stations installed to provide a general shop program.

   Note: These three small adjacent schools, located in the same district and connected by all-weather roads, suggest consolidation. Each is too small to provide an effective program in the offerings attempted irrespective of renovation or equipment addition.

INDUSTRIAL ARTS FACILITIES IN SELECTED SCHOOLS

Provo School District

A. Provo High School

1. *Industrial Arts:* Three laboratories in this school house the drafting, metalworking, and woodworking classes. The metalworking laboratory is adequate and well

equipped to provide instruction in several areas of metalwork. Storage of larger projects during completion presents some problems. The woodworking shop is well planned and equipped with a dust exhaust system. The drafting room is less than adequate in size, necessitating smaller classes than normal, causing a crowded classroom situation, and is lacking in space for displays of industrial paraphernalia.

2. *Trade and Industrial:* A two-hour vocational graphic arts class was started this year in a room that is entirely inadequate for effective instruction. The limited space requires that classes remain small, and the crowded condition promotes general confusion in the class. This shop is located next to the industrial arts drafting room. Consideration should be given to finding new space for the drafting classes and using the combined facilities of drafting and graphic arts for the graphic arts shop. It is evident that the graphic arts shop cannot succeed, let alone expand, in its present facility.

B. Wasatch Elementary

Elementary Industrial Arts: A program for sixth grade youngsters was being conducted in a regular classroom with classroom furniture and a portable tool cabinet-bench. Students were having to improvise work benches from tablet-arm chairs for their work on metal, textiles, and wood. This program, the only one in the state for elementary students, is commendable but loses much of its effectiveness because of the improvised facilities.

Granite School District

A. Central Junior High School

Industrial Arts: Two industrial arts shops—metals, woods and crafts—have been constructed in an old gymnasium. Space is adequate and classrooms adjoin each shop. Much of the effectiveness of these shops is due to the ingenuity and hard work of the two instructors.

B. Cyprus High School

Industrial Arts: Classrooms and laboratories to accommodate six areas of instruction in industrial arts and trade and industrial education are available. All shops and classrooms are well planned for technical and related instruction, and the automotive laboratory is an exceptionally fine laboratory for instruction. The automotive and wood laboratories are equipped for exhausting fumes and dust, but the exhaust system in the general metals lab is poorly designed for exhausting welding fumes and needs correcting. Most of the laboratories are adequately equipped; however, some additional equipment is needed in electronics to enable the instructor to employ the experimental-demonstration approach and move the class along at a more rapid pace.

C. Olympus High School

Industrial Arts: Facilities for five industrial arts laboratories in the areas of automotive, drafting, electricity-electronics, metalwork and woodwork are adequate. With the exception of electronics, the equipment in the various laboratories is adequate. The trend in the teaching of electronics is to the experimental-demonstration method, enabling the instructor to cover more content but requiring more of the basic test instruments.

Box Elder District, Brigham City

Box Elder High School

Industrial Arts: Well planned laboratories and good equipment are provided in the five areas of industrial arts—automotive, drafting, electronics, crafts, and wood. Classrooms adjoin each of the shops and a "storage" yard provides overflow space for the automotives program. There are some problems in connection with the arrangement of equipment in the ag farm shop which doubles as an industrial arts metal shop but, considering the necessity of this overlapping, the problems are minimal.

CONCLUSIONS AND RECOMMENDATIONS

1. Some excellent facilities exist which demonstrate that "know-how" is present. This is demonstrated at Hillcrest High School and Utah Trade Technical Institute.

2. Adequate planning guides are available from the office of the Utah State Board of Education to assist local boards in developing effective educational specifications. Some evidence

is present to suggest that these guidelines are disregarded in plant planning.

3. A program of future site acquisition was not in evidence even in growing population centers. This should be corrected.

4. Ample acreage should be a part of the thinking when sites are acquired. In the past this has not always been the case. For example, Utah Trade Technical Institute is now plagued by the problem of trying to expand its small 15-acre campus to 40 or 50 acres. This acreage should have been acquired at the outset.

5. The practice of continuing small schools such as Manti, Mt. Pleasant, Park, South Summit, and North Summit should be discontinued. Monies spent in renovation and equipment at these small units cannot produce an effective educational environment because of low enrollments.

6. The two junior high facilities at Bountiful and Lincoln schools reveal a very narrow concept of a program of industrial arts at this level. A re-examination of what this program can accomplish should be undertaken to the end that adequate space and equipment will be provided.

7. The space and equipment provided in the several centers visited reveal confusion as to function of programs in the several offerings. There should be common agreement as to what the junior high program involves, what the senior high offering attempts to accomplish, and the scope and sequence of the trade-technical and junior college curricula. Without this understanding the planning of physical spaces and equipment is at best less than effective.

8. Some disregard for accepted safety codes is in evidence. This is particularly true with respect to lack of panic hardware on exterior doors. There appears to be no state approving agency with power to enforce accepted codes with regard to fire and health.

9. Almost without exception the visual environment in the several plants fell far short of the goals set by the NCSC or the ASA. An attempt should be made to achieve these goals.

10. Current construction costs for school buildings in the Utah area appear to be $13.00-$15.00 per sq. ft. exclusive of

land, movable equipment, or services from a point 5′-0″ beyond the building line.

11. The program of property accounting is about 75 per cent complete. The IBM data cards might prove useful in the current study.